

The Commercial Car Journal

VOLUME X

PHILADELPHIA, DECEMBER 15, 1915

NUMBER 4

N. A. C. C. DIRECTORS MEET IN DETROIT

The Board of Directors of the National Automobile Chamber of Commerce, at its meeting on December 1st in the Detroit Athletic Club, appointed a special committee to consider new traffic regulation problems arising from the 2,500,000 automobiles now in use. J. Walter Drake, president of the Hupp Motor Car Co., is chairman of the committee, which has for its main object the lessening of automobile accidents. The committee, which will co-operate with safety first organizations and legislative bodies will consider speeding, the use of cut-outs, the education of pedestrians to use safety zones, the safety equipment requirements for cars and general traffic matters.

The traffic committee of the Chamber reported that 13,000 carloads of automobiles were shipped in November, as against 6710 carloads in November of last year.

GOVERNMENT REVISES EXPORT REGULATIONS

The Government has drafted new regulations for exports, effective January 1, 1916, for the purpose of facilitating complete descriptions in shippers' manifests, keeping valuations secret, facilitating the taking of oaths, the simplification of clerical work, etc. The Bureau of Foreign and Domestic Commerce has published an explanatory pamphlet for free distribution in response to a number of inquiries from shippers in all parts of the country.

STEWART ELECTS OFFICERS AND INCREASES CAPITAL

At a stockholders' meeting of the Stewart Motor Corp. on November 15th the following officers were re-elected: T. R. Lippard, president and general manager; R. G. Stewart, vice-president and engineer; R. P. Lentz, secretary and treasurer. The above three officers were also elected the sole three directors of the company. The capital of the company was increased from \$250,000 to \$325,000.

KELLY-SPRINGFIELD TIRE COM- PANY REDUCES PAR VALUE

Kelly-Springfield Tire Co., Akron, Ohio, and New York City, will reduce the par value of its common stock from \$100 per share to \$25. This will increase the number of shares outstanding four times. Stockholders of the new common stock will be entitled to one vote for each \$25 share, and preferred stockholders will be entitled to four votes for each share of \$100 preferred stock.

Table of Contents

	PAGE
Accessories and Appliances	31
Acme Two-Ton Model	25
Advertisers' Index	127
Atlas One Thousand Pound Commercial Car ..	28
Cartoon of Sales Managers	11
Croce Motor Truck Has Standard Units	28
Editorials	9
Factory News and Changes	6
Falcon Light Truck	27
Foreign News	30
Interviews and Stories of Successful Truck Dealers in All Parts of the United States	12
Buffalo's Globe Trotting Truck Dealer—By Geo. W. Grupp	20
Baltimore Branch Manager's Statement of Conditions—By Louis D. Krakow	42
Dealers in the National Capital—By Lee L. Robinson	16a
"Heart and Soul in Selling Trucks"—By C. L. Edholm	37
Harry W. Harrison, Who Showed Los Angeles Electric Delivery—By Frank Reed	40
Interviews With Leading New York Dealers —By C. P. Shattuck	15a
Interviews With Some of Chicago's Successful Dealers—By Walter A. Birmingham	17
Motor Truck Dealer and Factory Branch Situation in the Quaker City—By Charles H. Spencer	12
Peculiar Motor Truck Situation in Denver— By Charles M. Smyth	39
Right Truck in the Right Place Without Regard to Profit—By W. D. Meng	19
The House That Quality Built—By H. G. Blodgett	14a
KisselKar Model Has Worm Drive	29
Koehler Truck for the 1916 Season	24
M.T.A., of Philadelphia, Activities	7
Motor Truck Design and Construction Made Plain—By C. T. Schaefer	33
Personal Items	7
Rush One Thousand Pound Delivery Car	21
Stewart New Models	26
Variable Springing: A British Development in the Right Direction. Loaded and Unloaded Weight—By Our Foreign Correspondent ..	30

TOURAINÉ COMPANY CHANGES NAME TO "VIM"

The Touraine Co., Philadelphia, Pa., manufacturer of the Vim delivery car, has applied for an amendment to its charter changing its name to the Vim Motor Truck Co. The company is devoting itself exclusively to the production of the Vim and manufactures one chassis model only. The seven types of bodies are mounted on this one standard chassis.

NEW YORK CAR OWNERS MUST PAY PROPER INSURANCE RATES

The New York State Insurance Department in a recent investigation found that a New York City department store's trucks were being insured at the suburban rate, and that the department store was paying a much lower premium than it should for machines operated in New York City. The error was discovered in looseness of the terms of application blanks, statements and warranties on which insurance rates are determined. It is the intention of the superintendent to have the anti-discrimination law observed and intends to hold to strict accountability brokers who fail to make proper investigation regarding the warranties made by them as agents of the insured. He will also take up with all the companies writing this class of insurance the necessity of having statements and warranties so drawn up as to prevent easy and excusable evasions of the rates.

HENRY FORD & SON IS NAME OF TRACTOR COMPANY

The farm tractor company, which Henry Ford has founded, will be known under the name of Henry Ford & Son, Dearborn, Mich. There will be no stockholders. Mr. Ford, his son, Edsel, and the men who work in the tractor shops will divide the profits. Henry Ford will finance the concern to the extent of \$500,000 or \$1,000,000 and those sharing in the profits will be those who supply the brains and muscles. The farmers who buy the tractors will also share in the profits. There will be about 500 men employed at the Dearborn plant. Mr. Ford recently stated that his tractor would revolutionize farming to the extent that men may engage farming for seven or eight months a year and devote the balance of the year to other affairs. The first products of the Dearborn plant will be sent to California to Luther Burbank, the plant wizard.

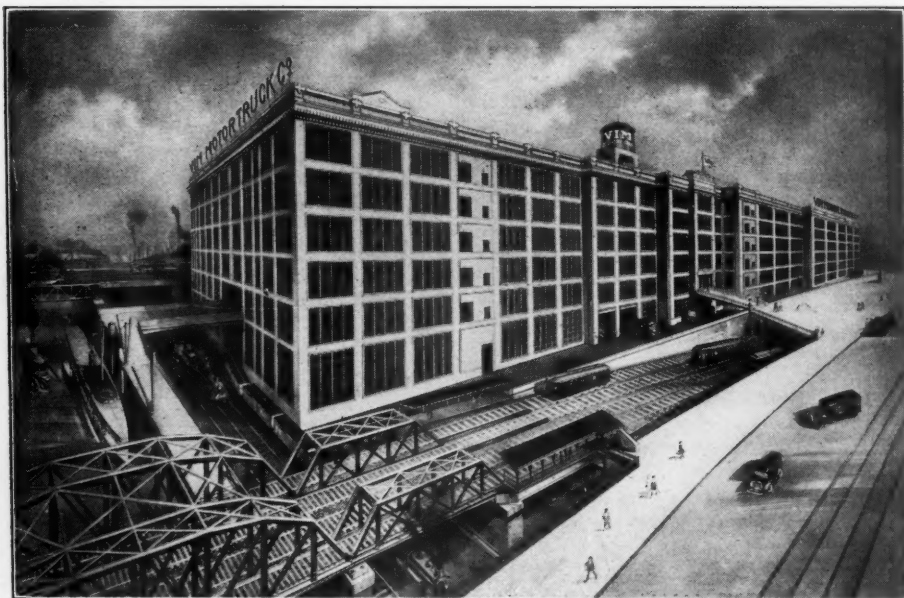
STUDEBAKER SHOWS LARGE EARNINGS

The Studebaker Corp., Detroit, shows net profits for the nine month ending September 30th of \$7,937,549. The report shows net sales amounting to \$46,851,349, from which was deducted for manufacturing and selling and general expenses \$38,857,339; for reserve and depreciation, \$298,471, leaving net earnings on sales \$7,695,539. Income from other sources amounted to \$242,010, totaling net earnings of \$7,937,549, from which \$854,992 was deducted, leaving \$7,082,557 to be carried to the surplus.

NEW WHITE-TILE PLANT OF THE "VIM" IN PHILADELPHIA

Much interest has been aroused among Philadelphians who use the Pennsylvania Railroad, the Subway and the Market street cars at the activity of steam shovels and workmen at the corner of Twenty-third and Market streets. This property for some years has been the athletic field of the Wanamaker employees' associations and is considered one of the star locations of Philadelphia, as it has Market street on one side, Pennsylvania Railroad on the other and the Schuylkill flowing directly in front of it.

This property has been acquired by the Vim Motor Truck Co., and the foundations for the \$1,000,000 new building are now being laid.



Plant Now Being Erected by Vim Motor Truck Company, Philadelphia

This superb plant is faced with white glazed tile. It is located at the river, between the Pennsylvania and B. & O. Railroads, and will have a floor space of 487,600 sq. ft. Thirty thousand Vim delivery cars are to be built this coming season.

The Vim Motor Truck Co., maker of the Vim delivery car, has in two years made nine different additions to existing plants. The company already has three distinct factories devoted to the manufacture of these little delivery cars, and is to-day—with, as mentioned above, but two years' actual growth to its credit—the largest producer of motor trucks in the world. In spite of this, the makers claim, orders have been pouring in much faster than the factories could turn out the product, and it was decided that the new plant so absolutely necessary should be one that would not only take care of present business, but of the certain immediate future growth. As a consequence Philadelphia is going to have one of the very finest buildings devoted to the manufacture of motor trucks in the country. The estimated cost is \$1,000,000. The building will occupy all the ground north of Market street to the Pennsylvania Railroad and from Twenty-third street west to the Schuylkill River. It will be six stories high and will have a total floor space of 487,600 square feet. Exteriorly it will be

finished in white glazed tile, with window frames in verde green. The interior, because of the immense window space, will be a typical daylight factory.

Up-to-Date Equipment and Methods

Manufacturing methods will be of the most scientific kind, the progress of the cars being from the top floor downwards until they reach the testing department. Heretofore the cars have been tested by road work alone, but as all records in this sort of work are more or less slipshod, an accurate method by means of dynamometers, which give an absolutely true index of the engine in each car, will be installed in the new factory. By an ingenious method the testing of the cars throws into action electric generators, the power of which is transferred to storage batteries

and utilized thereafter in addition to the central plant for lighting and power throughout the building. In fact, all machinery to be installed is of an electrical character including elevators, cranes, etc.

Receiving and shipping facilities are of the best. A road spur of the Pennsylvania Railroad enters directly into the building. This spur is capable of holding 28 cars, all of which may be loaded without shifting. It is expected that this building will be in operation by March 1, 1916. The present buildings will be maintained in connection with the new one, and during 1916 the minimum output, it is claimed, will be 30,000, working on one shift of eight hours.

Strong evidence of the importance that delivery plays to-day in the activity of thousands of businesses of widely varying character is evidenced by the stupendous success of the Vim delivery car.

An automobile interurban service between Corpus Christi, Kingsville and Bishop, Tex., has been inaugurated by a Bishop automobile concern.

S.A.E. DETROIT SECTION DINES MANUFACTURERS

More than 300 draughtsmen, engineers, metallurgists, production managers and executives of automobile companies gathered in the convention hall of the Hotel Pontchartrain on December 9th at a banquet given by the Detroit section of the Society of Automobile Engineers. This banquet to automobile manufacturers is the first in the history of the S.A.E. or any section of the Society. It was a get-together meeting of the manufacturers and the engineers who design their cars. Mr. W. H. Van Dervoort, president of the S.A.E., was toastmaster. In a short introductory speech he emphasized the fact that the engineers are working for the benefit of the manufacturers and requested them to give the work of the Society more thought. Chas. Clifton, president of the National Automobile Chamber of Commerce, gave a brief summary of the early automobile as a prelude to his topic, "Engineering Co-operation." Jas. Schermerhorn, at the conclusion of an interesting mixture of humor and moral lesson, paid a tribute to Henry Ford in his peace crusade which brought hearty applause from manufacturers and engineers. Isaac F. Marcossan, of New York, business writer, who was the principal speaker of the evening, and whose subject was "The War and Business," told the manufacturers that they must prepare to defend themselves against a deadly industrial war all Europe will wage against the United States at the close of the present war. That war, he said, would be one of retaliation for the manner in which this country has capitalized Europe's hour of need by selling it inferior merchandise; by selling it anything but goodwill. But in all the merchandise from stocks to shells sold to Europe there is one thing that holds up, and that has behind it the strongest of goodwill. That is the American automobile. Arthur T. Neely, a boy member of the Illinois Model Club, of Chicago, entertained the gathering with a fleet of miniature mechanical birds.

WISCONSIN TRUCKS TO MOVE TO SHEBOYGAN

Myers Machine Co., Sheboygan, Wis., capitalized at \$50,000, has been formed to take over the Wisconsin Motor Truck Co., of Baraboo, Wis. Louis P. Helm established the Wisconsin Motor Truck Co. about three years ago, and when desiring to remove from that city, succeeded in getting George P. Myers, who had been operating a large machine shop at Sheboygan, interested. At the close of the negotiations the new company was formed. A large addition 75x75 ft. is being erected to accommodate the Baraboo plant. The Myers Co. will continue the manufacture of woodwork and special machines under the direction of Mr. Myers, while the motor truck manufacturing department will be conducted by Mr. Helm. A number of improvements are being made on the truck, chief of which is the adoption of the worm drive.

SHORTAGE OF STEEL FELT BY MOTOR CAR MAKERS

H. W. Alden, vice-president of the Timken-Detroit Axle Co., recently made a statement in which he brought out that the alarming scarcity of high grade tool steel due to war conditions is making the big producers of steel-made products save every bit of steel scrap. In the Timken factory every little piece of steel down to less than 6 in. is saved; the worn out tools are also saved so they can be remelted and made into new tool stock. This shortage is caused not so much by the scarcity of steel and iron ore, as it is by the shortage of tungsten, a product which enters into the making of high speed steel. He states that this present chaotic condition in the automobile trade alone ought to be a great lesson to the American manufacturer not only of finished products, but of raw material to protect himself in the future. It should teach him not to depend on any other country for material that goes to make an American made product.

STRONG OPPOSITION TO AUTO-MOBILE TAXES

Automobile interests throughout the country are formulating strong opposition to the proposed plan of congressional leaders to place a tax on automobiles, gasoline and oils as a means of raising revenue for the use of national preparedness measures. Although a great many manufacturers of automobiles are in favor of an adequate defense plan, a taxation of the character proposed would fall most heavily on the consumer and the user. The American Automobile Association and the National Automobile Chamber of Commerce will bring action against the proposed taxation. It will be brought out that the tax would be illegal in being particularized upon a single class of the community, and that it would place a double tax on the automobile. In some States owners of motor cars have to pay a license tax, a personal tax and a highway or wheel tax.

BLAIR MOTOR TRUCK COMPANY REORGANIZED

The Blair Motor Truck Co., Newark, Ohio, has been reorganized, and the \$250,000 in stock offered for sale has been heavily over subscribed. The company now has a single order for motor trucks for European delivery which will run for five years, and represents a value of \$6,000,000. The order provides that fifty trucks each month shall be furnished as long as the war lasts, and twenty-five each month to the end of the five-year period.

AMERICAN ROAD BUILDERS' ASSOCIATION CHANGES DATE OF CONVENTION

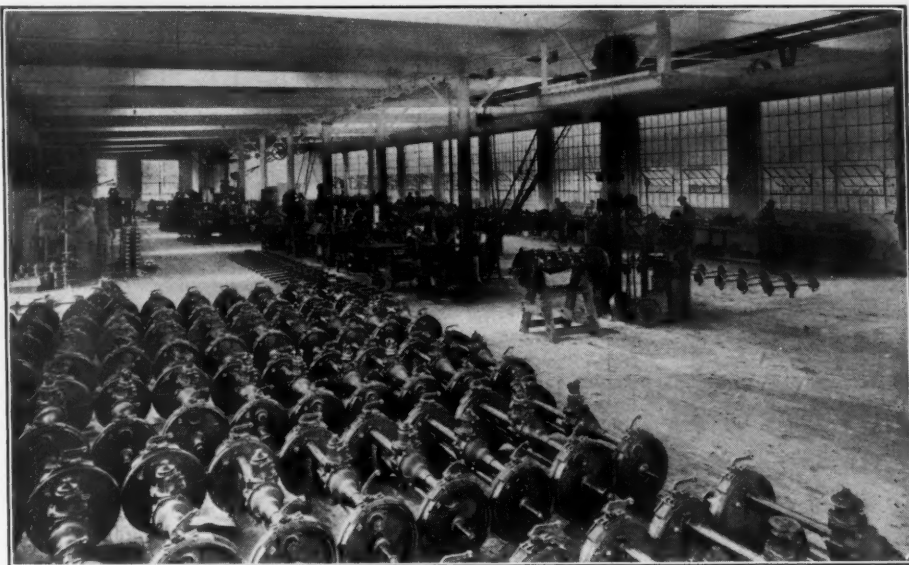
The American Road Builders' Association, which was to have held its thirteenth annual convention at Pittsburgh, Pa., during the week of February 22d, has changed the date. It will now be held during the week of February 28th, ending March 3d. One of the reasons for making the change was to give more time for putting Mechanical Hall in a proper condition.

GEORGIA'S NEW MOTOR VEHICLE LAW

Representative Garland Jones, of Coweta County, Ga., author of the new motor vehicle law expresses belief that a substitute has now been evolved which will eliminate the material objection against the old law. In making up the new law, the motor vehicle laws of thirty-five states were canvassed, and the best features of these incorporated with the best features of the old law. The old license fee called for a payment of \$5 for each motor vehicle regardless of its character or horsepower, while the new one, effective January 1, 1916, calls for license fees as follows: Motorcycles, \$2; automobiles not exceeding 25 h.p., \$3; automobiles from 25 to 40 h.p., \$4; automobiles exceeding 40 h.p., \$5; electric pleasure cars, \$4; commercial cars, \$3 for 1 ton capacity; \$4 up to 3 ton, \$5 for those from 3 to 5 ton and \$6 for those of more than 5 ton capacity. Under the new law, dealers by

PHILADELPHIA GARAGES MAY HAVE TO PROVIDE INDEPENDENT DRAINAGE SYSTEMS

The Departments of Public Works, Health and Charities and Public Safety, of Philadelphia, Pa., have framed an ordinance for the use of separators, which resembles somewhat the one that has caused the dealers and garage men of New York City so much inconvenience. It is broader, however, and more general in that instead of providing that each garage must have a separator, it provides for independent drainage systems. According to the proposed ordinance, if passed by the City Council, each garage would have to have a separate and independent drain system for each wash rack, and repair pit, and provide suitable intersecting traps on the outside of the garage, where they might be easily inspected. Each little system would have to be connected with the main sewer.



View of the Russel Motor Axle Company's Assembly Plant

This illustration shows one end of the assembly plant of the Russel Motor Axle Company, of North Detroit, Michigan. Another plant of same size is now being built. The company has increased its capital stock from \$150,000 to \$250,000, by the issuance of \$100,000 preferred stock, most of which has already been subscribed. The increase will take care of sufficient extensions for plant and machinery necessitated by the growing business in the manufacture of the Russel internal-gear drive axles for motor trucks.

paying \$10 will be issued a special license upon the basis of which they will be allowed to obtain duplicate numbers for demonstrating purposes at a cost of \$1 each.

UNITED STATES TIRE COMPANY TO MAKE IMPORTANT ANNOUNCEMENT SOON

The United States Tire Co. will make an important announcement to the trade about the first week in January, which it is believed will be the most important announcement of the year to automobile owners and tire dealers.

Mr. Weston states that for the past six months the company's best engineering force has been working on the production of the Union tread casing, which is one that will meet the standard of quality set by the company's other tires, and that may be sold at approximately the same price as the plain tread.

EDWARD A. CASSIDY TO HEAD NEW ORGANIZATION

Edward A. Cassidy will on January 1st sever his connection with the H. W. Johns Manville Co. as general manager of the automobile accessory division to become president of the Edward A. Cassidy Co., with headquarters in New York City with branches in Chicago, Detroit, Boston and San Francisco. The new company is exclusively a selling organization and will market the entire products of several large automobile accessory and parts manufacturers.

SPEEDWELL DISCHARGES RECEIVER

C. R. Green, receiver for the Speedwell Motor Car Co., Dayton, Ohio, filed his final account and has been discharged. His report shows \$19,180.20 received and expended as receiver between August 4 and November 4, 1915.

Factory News and Changes

Enders, M. A., Studebaker dealer in Fargo, N. D., has taken the agency for Studebaker commercial cars.

Hurlbut Motor Truck Co. opened new plant at Third Avenue and Harlem River, New York City.

Federal Motor Truck Co. is erecting new assembling plant on Leavitt Street, Detroit, at cost of \$10,000.

Paye Bus Co., 1728 N. Charles Street, Baltimore, Md., has taken the agency for the Republic truck.

The Fafnir Bearing Co., of New Britain, Conn., has recently opened a new Branch Office at 39 South Clinton Street, Chicago, Ill., with Mr. D. D. Davis as manager.

Garford Motor Truck Co., Lima, Ohio, has opened a branch house at 23d Street and Indiana Avenue, Chicago, under the name of the Garford Motor Truck Co., Inc.

Motor Truck Sales Co., New Haven, Conn., capitalized at \$25,000, has been formed by Andrew H. Tryon, Joseph Coulter, Thomas H. Wood and Jos. A. Howard.

S. K. F. Ball Bearing Co., Hartford, Conn., has elected the following directors: Frank A. Vanderlip, B. M. W. Hanson, A. Carlender and S. Winquist. B. G. Prytz is president.

Cott-McKelvey Auto Co., 446 N. High Street, Columbus, Ohio, Pullman and Jackson distributors, secured agency for United States trucks.

Pierce Speed Controller Co., Anderson, Ind., has moved to its new building where manufacturing can be carried on a much larger scale.

Imperial Wheel Works, Flint, Mich., is erecting addition to the main factory and to the dry kiln, which will increase the output 50 per cent.

Firestone Tire & Rubber Co., Akron, Ohio, has bought a building at Sterling Place and Bedford Avenue, Brooklyn, N. Y., which will be used as a Firestone branch.

Diamond T Motor Truck Co., of New York City, Inc., 245 W. 55th Street, New York City, has taken the distributorship of the Diamond T trucks for all the eastern states and for the export trade.

Brockway Motor Truck Co., Binghamton, N. Y., is erecting building 40x186 ft. and will add a second story in the spring to be used for the manufacture of motor fire trucks.

Goodyear Tire & Rubber Co., Akron, Ohio, at the end of its fiscal year October 31st, reports gross business amounting to \$36,000,000, an increase of \$5,000,000 over 1914 and \$11,000,000 over 1912.

Heavy Haulage Co., 155 E. 34th Street, New York City, moved to 47 W. 34th Street. The company contracts for special hauling work, which is done by a large fleet of trucks.

Speedwell Auto Parts Co., Dayton, Ohio, has bought the patterns, jigs, tools, tracings, parts, etc., of the Speedwell Motor Car Co., and is supplying parts for Speedwell cars and trucks.

Chase Motor Truck Co., Syracuse, N. Y., recently elected the following directors: Colonel A. C. Chase, L. O. Bucklin, E. C. Witherby and H. P. Bellinger. A. M. Chase is president and general manager.

Moss & Metcalf, Kansas City, Mo., Chase dealers, have been succeeded by the Chase Motor Truck Co. of Missouri, located at 411-15 Wyandotte Street, Kansas City, organized by William H. Wallace, Jr.

The Autocar Co., Ardmore, Pa., on the approach of cold weather sends to its patrons a little card with various anti-freezing mixtures which have been found to be effective.

Kelly-Springfield Tire Co., Akron, Ohio, and New York City, is now turning out 1500 pneumatic tires per day working on a 24-hour schedule. The output of 400 truck tires per day is to be reached January 1st.

Hugh Miscampbell, Duluth, Minn., is manufacturing trucks of 2½ tons capacity to sell for \$2700. With the exception of the Continental motor, the machine will be largely made in the Miscampbell plant.

O'Bannon Corporation, manufacturer of artificial leather, New York City, has increased its output from 20,000 yards to 30,000 yards per day, and are still behind in orders.

Indianapolis, Ind., has spent almost \$8000 in its campaign for strict control of traffic, in the purchase of semaphores, standards to mark the traffic zones, chains to connect the standards, etc.

Packard Motor Car Co., Detroit, since November 1st has added over 500 people to the pay roll, as the result of the arrival of trainloads of material which had been held up.

W. H. Schwab, formerly sales manager of the Gemco Mfg. Co., Milwaukee, and C. W. Beckler, advertising manager of the same company, have joined the Auto Parts Co., Milwaukee, Wis.

E. K. Rowland, vice-president and general manager of William & Harvey Rowland, Inc., Philadelphia, Pa., died on November 23d while on a business trip to Bridgeport, Conn.

Niles Car Mfg. Co., Niles, Ohio, which has been manufacturing street cars for a number of years, will embark in the manufacture of a 3-ton, 1-ton and ½-ton motor truck assembled from standard parts.

The Service Motor Truck Co., Wabash, Ind., which now utilizes 75,000 sq. ft. of manufacturing space, is building two new structures which, when completed, will allow the company to practically double its output.

Michigan Truck & Lumber Co., Holly, Mich., manufacturer of woodwork for Ford, Hudson, Buick, Maxwell and Chandler bodies, is adding 5000 sq. ft. of floor space to plant. The company is working day and night to keep up with orders.

Motor Car Equipment Co., 55 Warren Street, New York City, moved to 1921 W. 62d Street. The building has a floor space of 55,000 sq. ft. The company carries on a wholesale automobile supply business and the move was made in order to be more accessible to the automobile trade.

Firestone Tire & Rubber Co., Akron, Ohio, has started a follow-up campaign which is expected to help both the company and the dealers. Stationery, signs, lantern slides and newspaper electrotypes are being used to aid the dealers, as well as circular letters and printed matter sent to owners.

American Locomotive Co., Providence, R. I., according to Isaac M. Cates, of Baltimore, lost \$7,000,000 in its automobile department. He states that accountants employed by him have found definite proof in the company's books that this amount was lost, and the amount of \$2,300,000 has been written off.

Booth Felt Co., Inc., Brooklyn, N. Y., which recently opened a factory at 12th and Grand Trunk R. R., Detroit, in order to give Detroit and other automobile manufacturers service, reports after the business has been open only two months, that the trade is taking advantage of the complete and well-assorted supply of felts especially selected for the motor and accessory trades.

Bosch Magneto Co., New York City, has closed contracts with four prominent commercial car concerns to use Bosch magnetos for the coming season. They are the Herwood-Barley Mfg. Co., Marion, Ind.; Krebs Commercial Car Co., Clyde, Ohio; D. F. Poyer Co., Menominee, Mich., and the Service Motor Truck Co., Wabash, Ind.

Sta-Tite Packing Ring Co., St. Louis, Mo., has changed the name to the Keys Piston Ring Co. The name of the Sta-Tite piston ring has been changed to the K-P ring. W. H. Keys is president of the company. The personnel of the company, the construction of the ring and its price will remain the same.

International Rubber Tire Co., South Bend, Ind., has been incorporated with capital of \$1,000,000 to manufacture auto tires. Peter E. Studebaker, son of the late Henry Studebaker, one of the founders of the Studebaker Corp., is president, and E. H. Schwab, vice-president and director. A factory will be erected in South Bend.

Lavine Gear Co., Racine, Wis., has strengthened its organization, and will install new and modern machinery as fast as is consistent with good business. Herman A. Uihlein is president and treasurer; P. B. Wohlrab has been elected vice-president; D. L. Robertson, purchasing agent and office manager, and E. M. Caskey, sales and advertising manager.

Autocar Co., Ardmore, Pa., held a sales conference on November 26th at the Hotel Martinique, New York City. About ninety representatives attended, M. S. Bulkley, the Pacific coast representative, having made the journey from Los Angeles. The conference was called to map out means and methods of disposing of the increased production of Autocars next season.

J. M. Shock Absorber Co., Philadelphia, which recently sued the J. M. Shock Absorber Co. of New York, for infringement of its trade mark and the use of the company name, has been granted a temporary injunction against the New York concern. The injunction restrains the New York company from using the J. M. trade mark or firm name.

Fred I. Willis, who has been associated with the automobile and bicycle trade for twenty-two years, has become affiliated with the Central Rubber & Supply Co., 120 S. Meridian Street, Indianapolis, Ind., as manager of the automobile and bicycle accessories departments. The Central Rubber & Supply Co., is a factory distributor for the Kelly-Springfield line of automobile truck and vehicle tires, carrying a large line of automobile and bicycle accessories.

Continental Motor Mfg. Co., Detroit, has increased its capital stock from \$2,400,000 to \$2,900,000, and has declared a stock dividend of \$416,000 to present stockholders. Of the new capital stock, \$900,000 is preferred and it will be subject to redemption at par October, 1932. It may, however, be redeemed before that date at \$105 per share, plus accumulated dividends, after 60 days' notice to holders.

Chicago-St. Louis Automobile boulevard promoters are at work planning the concrete highway between St. Louis and Chicago. This road will be confined strictly to motor driven vehicles, either pleasure or commercial. It is to be divided in the center by a curbing, thereby keeping north bound traffic on the right and south bound traffic on the left.

The charge for the use of the road will be \$0½ per mile. It will cost for a through trip from St. Louis to Chicago \$1.50; toll gates will be stationed every ten miles. The minimum charge for the use of the road will be \$.05.

E. W. Ganns, who recently joined the Studebaker Corp., has become manager of the Studebaker Indianapolis district.

E. M. Gordon, for many years connected with the White Co.'s Boston branch, has joined the Boston branch of the Kelly-Springfield Tire Co.

J. N. Alfred, cashier of the Wilson Foundry & Machine Co., Pontiac, Mich., has become auditor of disbursement for the Timken-Detroit Axle Co., Detroit.

J. S. Hurd, formerly connected with the Gramm-Bernstein Co., Lima, Ohio, has become traveling representative for the Four Wheel Drive Auto Co., Clintonville, Wis.

H. L. Carpenter has become associated with the Harolds Motor Car Co., New York City, and will represent both the Pierce-Arrow pleasure and commercial cars in Brooklyn and Long Island.

C. S. Huntoon, connected with the White Co., Cleveland, Ohio, will hereafter make his headquarters in Portland, Ore., covering the states of Oregon, Washington, Idaho, Montana, and British Columbia.

V. L. Cramer, for the past three years president of the American Distributing Co., has become district sales manager of the F. S. Carr Co., of Boston, with headquarters at the Detroit branch, 969 Woodward Ave. The Boston corporation manufactures Neverleek top material.

Personal Items

F. A. Cole, who was formerly connected with the Four Wheel Drive Auto Co., Clintonville, Wis., has again joined that company in the capacity of traveling representative.

Robert M. Ellis, manager of the export department of the Splittorf Electrical Co., Newark, N. J., with headquarters in New York City, has become manager of the Boston branch.

W. C. Kenney, formerly connected with the Northway Motor & Mfg. Co., Detroit, as division superintendent, has become chief mechanical inspector of the Hyatt Roller Bearing Co., of the same city.

Charles R. Culver, for the last two and a half years connected with the Stoddard Motor Car Co., Pierce-Arrow agent at Springfield, Mass., has purchased an interest in this firm and has been elected vice-president of the company.

A. B. Hanson, formerly manager of the Service Department of the Chalmers Motor Co., has joined the Service Motor Truck Co. of Wabash, Ind., as general manager. He has had a broad experience in the various fields of the automobile industry.

W. O. Dayton, chief engineer of the New Era Engineering Co., of Joliet, Ill., has recently organized a company for the manufacture of light automobile chassis and light worm-drive axle for local and export trade.

L. J. Carter has become sales manager of the Peck Auto Sales Co., Studebaker dealer in Grand Rapids. He was until recently in charge of retail sales at the Saginaw branch of the Studebaker Corp.

Chas. M. White, Jr., formerly manager of the Detroit office of the Stromberg Motor Devices Co., Chicago, has become connected with the spring department of the Detroit Steel Products Co., Detroit.

Herbert H. Murden, general manager and engineer of the Knickerbocker Motor Truck Mfg. Co., New York City, manufacturer of the Knickerbocker motor truck, has resigned his position, his resignation taking effect December 31st. He has been in the automobile business about 15 years, starting as an apprentice in the Haynes factory.

Frederic H. Poor, since 1909 manager of the S. K. F. Ball Bearing Co., of New York City, has resigned that position and has opened an office at 30 Church Street, New York City. The new S. K. F. Ball Bearing Co., of Connecticut, is planning to absorb the old New York company, and it is expected that Mr. Poor will take another contract with the S. K. F. interests.

Activities of the Motor Truck Association of Philadelphia

OFFICERS

E. B. JACKSON
President
J. D. HOWLEY
Treasurer

EMLÉN S. HARE
Vice President
W. H. METCALF, Sec'y
5 N. Twenty-First Street



BOARD OF GOVERNORS

L. J. EASTMAN **R. W. COOK** **H. M. COALE**
O. E. STOLL **O. J. DOOLITTLE**

COMMERCIAL CAR JOURNAL OFFICIAL ORGAN



AT the November meeting of the Motor Truck Association of Philadelphia, a few of the scheduled speakers were unable to attend. Owing to the illness of the President, E. B. Jackson, Vice-President Emlen S. Hare presided. He introduced C. R. Culyer, manager of the liability department of Beidler and Bookmyer, as the first speaker. Mr. Culyer's subject was the workmen's compensation act, which was passed by the last Legislature and which will become a law after the first of the year. He said Pennsylvania was following in the footsteps of twenty-four other States for the benefit of the workingman. The workmen's compensation laws in America, he said, were modeled after those first placed in force in Germany in 1884, and later in Great Britain in 1900. These laws aim to equalize the burden of accidents, but in States where such laws do not exist, nine cases out of ten are won by the employer in the common courts. The workmen's compensation law, therefore, establishes a better social condition between workmen and employer.

Mr. Culyer also explained thoroughly the difference between the four carriers prescribed by the new law to handle this liability insurance. The four carriers are divided as follows: The individual carrying his own burden, if he can show he is capable financially; the State Insurance Fund, the mutual companies and the commercial stock companies. Three States: Washington, West Virginia and Ohio

which allowed only the State Insurance Fund to operate, Mr. Culyer claims, have found this system utterly impossible and in this respect Pennsylvania has a better law than any of the others by allowing four types of carriers.

The other speakers were W. W. Woodruff, of Strawbridge & Clothier, who told how his firm had started with two trucks in 1909 and increased to forty-two at the present time; C. E. Hancock of the Curtis Publishing Co., told of the efficiency of the movable bodies as used by his company; Chief Mechanician George D. Walker, of the Philadelphia Fire Department, gave a few interesting facts concerning the electric and gasoline fire apparatus in use in this city; C. B. Harvey, of the Terminal Market Delivery Co., and C. Barbara, of the Central News Co.

Emlen Hare prepared an interesting paper entitled "Thoughts for the Truck" which he read.

"Just how much thought and care is justified," said Mr. Hare, "is often a debatable question. However, there is really no room for argument when facts are considered, and I wish to point out here, while a great deal of thought should be given the selection of a truck, that at least four times the thought should be given by the user to his operating conditions and the care of the truck. I make this statement based on the fact that the first cost or price of any good motor truck does not represent at the most over 20 per cent. of the total cost of same. By 'total cost' I

mean the price of the truck plus the cost of operating and maintaining it over its useful life. In this cost of operating and maintaining I include not only all the mechanical up-keep, tires, fuel, oil, etc., but all overhead or fixed charges, such as garage supervision, driver insurance, interest on investment, depreciation, etc., and I believe that these should rightfully be included in my reasoning, as these costs will be lowered or raised per ton delivered in direct proportion to the truck's operation.

"Assume the price of a 3-ton truck complete to be approximately \$3500. If it is a good truck and properly cared for its useful life should be at least five years. It costs at least \$10 per day to operate and maintain a 3-ton truck, or in the five years of its useful life it costs \$15,000, making the total cost \$18,500, of which the first cost will be seen represents less than 20 per cent.

"While the above remarks are primarily made for the good of the motor truck industry, if they are of advantage to this industry, they must, if my reasoning is correct, prove four times as advantageous to the user."

Mr. Hare's paper also touched on the faulty operation, and pointed out the great difference in the cost of operation in various branches of business and cited the methods of some users which reduced the cost of operation fully 20 per cent.

The proper way of handling large truck delivery systems was also explained, which varied greatly from the course to be pursued by the smaller user.

RAILROAD PETITIONS COMMISSION TO REGULATE TRUCK LINES

The Western Association of short line railroads has petitioned the California Railroad Commission to regulate the Wichita Transportation Co., which operates a freight and passenger truck line between San Diego and Imperial Valley, claiming that the truck line subjects the short line railroads to prejudice and disadvantage causing them great loss by reason of unreasonable differences in charges and fares. It also claims that as the truck line carries passengers and freight, it is a common carrier and subject to the public utilities act, and that it should register under that act. This is the second truck line that has competed so effectively with railroads as to compel them to ask for aid.

NEW YORK DEALERS WIN STEP IN SEPARATOR FIGHT

The Automobile Dealers' Association, of New York, in its fight with the Fire Department against oil separators in garages, has won an important step. The Fire Commissioner recently refused to grant a permit to a certain garage on the ground that it did not have an oil separator. The dealers took the matter up and asked for an order of mandamus requiring him to grant the permit. The action was brought before the Supreme Court, which has ordered the entire matter to be heard before a jury, at which hearing questions with regard to the necessity of oil separators will be determined.

M. RUMELY COMPANY BOUGHT OUT BY CREDITORS

The plant, property and business of the Rumely tractor concern have been bought out by creditors headed by Receiver Mount, who have formed a new company capitalized at \$26,250,000. The plants at Laporte, Battle Creek and Toronto will be operated with 3000 employees, but the plants at Richmond, Ind., and Stillwater, Minn., will be abandoned.

GUNN HEADS UNITED STATES TIRE COMPANY

James Newton Gunn, formerly general manager of the Studebaker Corp., has become president of the United States Tire Co., in full charge of manufacturing and selling. He has also been appointed assistant to the president of the United States Rubber Co., of which the United States Tire Co. is a subsidiary. He succeeds E. S. Williams, who has resigned in order to devote more time and attention to the mechanical rubber business of the United States Rubber Co.

CATALOGS SHOULD BE SENT TO VENEZUELA BY MAIL

Catalogs and advertising matter sent to Venezuela by parcel post are subject to duty, while the same matter sent by mail is admitted free. When a Venezuelan firm is obliged to pay 40 cents or 50 cents duty on a catalog of some American maker sent by parcel post, it naturally refuses to take it, and the maker in America wonders why.

M. & A. M. OPENS NEW DEPARTMENT

The Motor & Accessory Manufacturers, New York City, which has 238 manufacturers of automobile accessories in its membership, has added a new department to its activities. It is now prepared to do addressing work for all its members. There has been compiled in stencil form a list of over 2,000,000 automobile owners, classified according to the make of car, so that any accessory maker can readily address all of these owners in any city, State or section of the country. Any member can forward his envelopes and have them addressed and returned to his place of business. The list is open only to accessory makers who are members of the association. Quarters have been secured at 225 West Fifty-seventh street, New York City, where this work is being carried on.

DENBY INAUGURATES SALES EFFICIENCY COURSE

Denby Motor Truck Co., Detroit, Mich., has put into operation a new plan whereby a better understanding will be established between manufacturers and the users of their products. All owners and users of the company's trucks are entitled, free of charge, to the enrollment of one man in the Denby Business Building and Sales Efficiency Course for each truck they own or operate. This instruction consists of 36 lessons on a variety of subjects, but all closely allied to salesmanship and the salesman. Personal attention is given to the individual requirements of students.

FEDERAL AWARDS LETTER PRIZES

The Federal Motor Truck Co., Detroit, has completed its letter contest and awarded the first prize of \$100 to F. F. Wedemyer, of Wamsutter-Slater Stage & Express Co., Baggs, Wyoming; the second prize of \$50 to Chas. H. Plumb, wholesale grower of flowers, Detroit; third prize of \$25 to the General Electric Co., Buffalo (central station) competed for by advertising manager Roy Crandall, and fifteen other prizes of \$10 each. The object of this contest was to draw from owners their reasons for purchasing Federals.

NEW YORK POLICE CLAIM PEDESTRIANS ARE NEGLIGENT

According to a report of the Police Department of New York City, 90 per cent. of the street traffic accidents in that city are due to carelessness or other fault of the injured. The public has demanded rigid regulation, blaming the drivers, particularly of motor-driven vehicles, but the police reports now show that the pedestrian needs to be controlled and to exercise greater caution. It was shown that from January to July street accidents increased and then gradually decreased until the end of the year; that the greater number of accidents occur between 11 a. m. and noon and from 5 to 7 p. m.; that 45 per cent. of those fatally injured are children, and that the largest number of children killed range in age from 2 to 8 years.

MAGNETO MAKERS EFFECT AMICABLE SETTLEMENT

Bosch Magneto Co. and the Splitdorf Electrical Co., which have been in litigation for two years over magneto patents, have come to an amicable settlement. In two suits by the Bosch Co. against F. A. Baker, who sold motorcycles equipped with Splitdorf ignition system, the Splitdorf Co. recognized the validity of the Bosch patents, and in the suit by the Splitdorf Co. against the Bosch concern, Bosch recognized the validity of the Splitdorf patents. Both companies some time ago discontinued the use of the alleged infringing constructions, and the ending of the litigation will therefore have no great effect.

EIGHTH CONVENTION OF SALES MANAGERS OF ELECTRIC STORAGE BATTERY COMPANY

The Eighth Convention of the Sales Managers of the Electric Storage Battery Co., of Allegheny Ave. and 19th St., Philadelphia, Pa., was recently brought to a close after a week's session, at the Bellevue-Stratford Hotel, Philadelphia. The sessions, presided over by Herbert Lloyd, the president and general manager, opened at 9.30 a. m., and closed at 5.30 p. m. each day. Papers bearing upon the development of various fields of storage battery service were presented by engineers and department heads of the general office and a number of subjects were discussed concerning important matters pertaining to the different territories.

TO TEST OUT MASSACHUSETTS MOTOR LAW

The Automobile Legal Association, through its general counsel, William A. Thibodeau, recently took the first step in the fight to be waged against the proposal to increase the fees of trucks and cars. A test case was begun to try out the constitutionality of the Massachusetts motor law. Many of the members of the association, while owners of passenger cars, operate commercial cars in their business, and in making the fight Mr. Thibodeau will represent both interests. The Boston Commercial Vehicle Dealers' Association and the Boston Automobile Dealers' Association will aid in the testing out of this law, and the Bay State A. A. and other associations will also give their help.

SPRINGFIELD METAL BODY COMPANY TAKEN OVER BY A MILLION DOLLAR CONCERN

The Springfield Body Co., Springfield, Mass., capitalized at \$1,000,000, has taken over the Springfield Metal Body Co. The officers of the new concern are: W. L. Fry, president; E. W. McGookin, vice-president and director of sales; Hindsale Smith, vice-president and chief engineer, and A. P. Smith, treasurer. About a year ago W. L. Fry, president of the new company, became interested in the old concern. The directorate is composed of the officers and Frederick Fuller.

THE COMMERCIAL CAR JOURNAL

Entered as second-class matter at the Post Office at Philadelphia, Pa.
under the act of March 3, 1879

Vol. X. PHILADELPHIA, DECEMBER 15, 1915 No. 4

Published the 15th of each month by the
CHILTON COMPANY

Market and 49th Streets
JAMES ARTMAN, President
GEO. H. BUZBY, Vice President

Philadelphia, U. S. A.
C. A. MUSSELMAN, Treas. and Gen'l Mgr.
A. H. VAUX, Secretary

ADVERTISING DEPARTMENT

Eastern Mgr., C. MONROE SMITH, New York Western Mgr., C. C. McKINNEY, Chicago

EDITORIAL DEPARTMENT

JAMES ARTMAN, Editor-in-Chief
E. S. FOLJAMBE, Managing Editor
ALBERT G. METZ, Ass't Managing Editor
J. HOWARD PILE, Associate Editor

SUBSCRIPTION RATES

United States and Mexico.....One Year, \$1.00
Other Countries in Postal Union, including Canada.....One Year, \$2.00
Make checks, money orders, etc., payable to Chilton Company
Change of Address—Subscribers desiring their address changed, should give the old
as well as the new

The Commercial Car Journal is a Member of the
Audit Bureau of Circulations

ADVANTAGES TO THE SMALL TOWN TRUCK AGENT OF CONDUCTING A TRANSFER BUSINESS AS A SIDE LINE



TRUCK agents in numerous instances have added materially to their revenues by conducting on the side a general haulage business, making use of several of the machines of the make which they represent.

In large establishments, where business is brisk, there is hardly time or the inclination to conduct an auxiliary business of this kind. But in localities where the sale of trucks is not numerous enough to make the business a profitable one for the agent, or where his business has not yet been built up to the point where the income is sufficient to carry the establishment, the transportation business offers a solution and can be made at once a lucrative business in itself and an aid to the agency business.

Several cars are kept continuously in service doing general hauling or delivery work for merchants, and as many of these men are prospective customers, although they have never signified any intention of buying trucks, this service eventually assists the sales department.

There is no question but that commercial cars intelligently handled can in most cases do hauling far better and for less money than by slow horse methods. This being the case,

difficult long-distance transportation problems can be handled successfully by trucks with a profit to the operating company, which in the case in hand is the truck agency, and at the same time the cost to those who are having goods hauled is so reasonable that they cannot but see that it would pay them to own trucks for this work themselves. By this means trucks are actually made essential to their business, and when the contract ceases they will in all probability purchase trucks of their own. These will naturally be of the make which has given them satisfaction, and thus a sale is made.

There is another phase of this business which cannot be overlooked. Many truck users often have additional or special work beyond the capacity of the machines which they are operating. Men who are already using trucks dislike exceedingly to have to resort to horses or other slow methods of caring for deliveries or haulage. If the agent is conducting a business of this kind, he is in a position at any time to help out his customers with additional cars. In the course of time as the business grows, the extra work becomes sufficient to necessitate the purchase of an additional machine, and in this case what is more natural than to put on the truck which has been doing this very work.

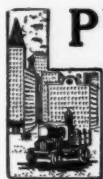
Aside from these sales features, there is money in the haulage business when intelligently handled. If anybody knows how to handle trucks economically, it should be the agent.

One of the most important factors in a truck agency is the kind of service which the agent is able to give to his customers. This depends largely on the number of parts carried in stock, and on the extent of his garage and repair shop facilities. With a well-established transportation business, the garage and repair shop facilities must be maintained in order to care for machines in use, and this is kept up by the transportation business, thus the agent operating such a service has always at hand a force of competent mechanics and a suitable garage and repair department in which to care for his customers.

As all these machines are of one make, a large stock of parts can gradually be acquired. When in an emergency a customer needs a part, this can be supplied and installed in the quickest possible time. This constitutes service.

It will pay agents who are just establishing their business, or who are in localities where the truck sales alone will hardly be sufficient to maintain a suitably equipped establishment, to investigate thoroughly the possibilities of conducting such a business in conjunction with their agency.

MATERIAL AND PARTS SHORTAGE WILL CURTAIL 1916 OUTPUT



PERHAPS fortunately for the truck industry, the lack of raw material will this year hold production at a point below that intended by the makers.

The war's influence on the truck industry has been to greatly increase the business of many of the largest makers. But this increase, although amounting to over \$30,000,000, is in reality not over 12 per cent. of the total value of this year's production of commercial cars.

This shows the tremendous growth of the home consumption of trucks and that the war, although acting as a decided stimulus, is not as great as the unprecedented amount of publicity accorded it has led many to believe.

The CCJ has most readers because it gives most information

The truth of the matter is that the European conflict is now going to have an exactly opposite influence. The war demand for raw material, particularly steel, aluminum, etc., is now being felt by the truck makers. Almost everything that enters into truck construction is either directly or indirectly affected. Parts makers are unable to get sufficient material, and thus in turn are not able to supply the complete car makers in the desired quantities.

This temporary curtailment of the material and parts market, however, instead of working a great hardship to the industry, will in all probability merely result in a more sane and normal production for the coming season. And as an overproduction is about as serious a mistake as can be made by any industry, the present tendency for the war to limit production may be looked upon as really beneficial rather than otherwise.

Steel and Rubber Markets

General Rise in Steel Continues

The price of steel rails, structural steel, in fact, almost all grades is gradually rising, due to the unprecedented demand, both at home and abroad. In spite of the continual rise in price there seems to be no let-up in the demand, not only on the part of the nations at war, but from the home market as well. Railroads are ordering new rolling stock and rails, bridges and large structural steel constructional work material is being contracted for. Quotations on December 11th were as follows:

STEEL PRODUCTS PRICES

Bessemer billets, per ton, mill	30 00 a	...
Open hearth, per ton, mill	30 00 a	...
Sheet bars, per ton	31 00 a	...
Forging billets, per ton, mill	48 00 a	52 00

The above prices are at tidewater, in carloads and larger lots. For quantities less than 2000 lbs., but not under 1000 lbs., \$2 per ton additional is charged, and less than 1000 lbs., \$8 per ton additional.

SHEETS

The following prices are for 100-bundle lot and over f.o.b. mill; smaller lots are \$2 per ton higher:

Blue Annealed Sheets—		Nos. 13 and 14	..2.20 a	....
Cents per lb.		Nos. 15 and 16	..2.25 a	....
Nos. 11 and 12	..2.30 a			
Nos. 13 and 14	..2.35 a	Galvanized Sheets of Black		
Nos. 15 and 16	..2.45 a	Sheet Gage—		
Box Annealed Sheets, Cold		Nos. 10 and 11	..3.75 a	....
Rolled—		No. 12	.....3.85 a	....
Nos. 10 and 11	..2.15 a	Nos. 13 and 14	..3.85 a	....
No. 12	.....2.15 a	Nos. 15 and 16	..3.95 a	....

IRON AND STEEL AT PITTSBURGH

Bessemer iron, Valley furnace	18 50 a	19 50
Bessemer steel, f.o.b. Pittsburgh	30 00 a	...
Skelp, grooved steel	1 70 a	...
Sheared steel skelp	1 80 a	...
Skelp, grooved iron	2 10 a	2 15
Sheared iron skelp	2 20 a	2 25
Ferro-manganese (80 per cent.) seaboard	100 00 a	110 00

Steel, melting scrap	17 50 a	18 00
Steel bars	1 70 a	1 80
Black sheets, 28-gage	2 50 a	2 60
Galvanized sheets, 28-gage	4 75 a	4 85
Blue annealed, 10-gage	1 80 a	1 90
Tank plates, 3/4 and heavier	1 90 a	...
Wire rods	40 00 a	...
Plain wire	1 85 a	...
Plain wire, galvanized	2 50 a	...

Rubber Market Now Quiet

The price of rubber has undergone some sharp fluctuations since our last report, both upward and downward. At the present time the rubber market is quiet, fine hard-cured Para selling at \$.69 on December 11th. There has, however, been a general increase in price since a month ago, when the same grade was selling at about \$.575. This is due to the continued demand on both sides of the water and to the fact that shipping and labor conditions are abnormal. There is at this writing no indication of relief in the way of large supplies of plantation rubber arriving. This will tend to increase the demand and price of fine, hard cured Para. Quotations on December 11th were as follows:

Para—		Smoked sheets		..85	a36
Up-river, fine, per lb69	a....	Sheets and biscuits		84	a....
Up-river, coarse	..59 a....				
Islands, fine	..65 1/2 a66				
Islands, coarse	..33 1/2 a34				
Cauchó ball, upper	.60 a....				
Cauchó ball, lower	.57 1/2 a58 1/2				
Cameta	..36 a37				
Ceylon—		Centrals—			
First latex pale	..87 a....	Corinto	..55	a56	
crepe	..87 a....	Esmeralda	..54	a....	
		Guayule	..54	a56	
		Balata, sheet	..54	a56	
		Balata, block	..38	a39	
		African—			
		Massai, red	..a....		

DOMESTIC SCRAP RUBBER

Boots and shoes	..10	a....
Tires—		
Automobile	5 3/4 a	5 7/8
Bicycle, pneumatic	3 1/4 a	3 1/2
Hose, steam, fire	3/4 a	1 1/2
Air brake	2 1/2 a	3
Red	12	a 12 1/2
Inner tubes, No. 1	27 1/2 a	...
Inner tubes, No. 2	11 1/2 a	12

JITNEYS CRIPPLE ATLANTIC CITY LINE

The Atlantic City & Shore Railroad Co., operating cars on the principal thoroughfares of Atlantic City, N. J., has been forced into receivership by jitney 'bus competition. The company reports an actual deficit of \$300 a day. It owes the West Jersey & Seashore Railroad Co. \$35,000, and has \$950,000 worth of bonds, on which \$23,000 interest will be due December 1st, and has no money on hand. The loss during the last year was said to be about \$100,000, although in the five previous years \$1,000,000 in profits was paid to stockholders. There seems to be a sentiment in favor of the city operating the line.

PACKARD COMPANY DEVELOPING AEROPLANE MOTORS

Packard Motor Car Co., Detroit, is developing a motor for use in military aeroplanes, according to a statement made by Henry Joy, president.

TRUCK MAKERS REDUCE PRICES

United States Motor Truck Co., Cincinnati, Ohio, has reduced the price of its models E, D, H, J and K, effective in 1916, as follows:

Model	Old Price	New Price
E	\$2550	\$1900
D	3200	2400
H	2700	2200
J	3400	2800
K	4200	3600

Moreland Motor Truck Co., Los Angeles, Cal., has reduced the prices of its trucks as follows:

Capacity	Old Price	New Price
1-ton	\$1850	\$1150
1 1/2-ton	2200	1850
2 1/2-ton	2800	2400
4-ton	3650	3200

NOVEL SALES-STIMULATING CONTEST

The Puritan Sales Co., Detroit, Mich., is conducting a big globe touring contest in which points figure as miles and are based on the weekly volume of sales. A large map is hung in the Puritan plant

showing the geographical position of the salesmen. The contestants started from Detroit on an imaginary tour of the world, and different colored tacks are used to designate the points of interest. Bulletins with interesting anecdotes en route and sales stimulating talks are given weekly.

GARFORDS TO SWEEP NEW YORK STREETS

New York City Street Cleaning Department has taken another step in the motorization of that city's municipal departments. The horse-drawn street sweepers will be replaced by a fleet of Garford trucks. Commissioner Fetherston was convinced of the value of trucks as street cleaners last March, when a fleet of Garfords completed in 23 hours of continuous work what it formerly took horse-drawn sweepers ten days to accomplish. He stated that he was so well pleased with the work of the trucks last year that he proposed hiring an additional number for the snow removing this winter.

CCJ GALLERY of SALES MANAGERS

C.J. CROSS
SALES MANAGER
UNITED STATES
MOTOR TRUCK CO.
CINCINNATI, OHIO

SH-H-H-H! STOP A FEW MINUTES YOU MAKE THESE GENTLEMEN NERVOUS

LEAVE ROOM ON THAT SHEET FOR ME SKIVITCH

EUROPEAN SALES ORGANIZATION

D.D. DAVIS
WESTERN SALES MGR.
FAFNIR BEARING CO.

NOT SO FAST WAIT UNTIL I GET MY BEARINGS

HERE YOU ARE, WE'VE BEEN WAITING FOR YOU DAVE

LAND SAKE IF DOES AINT THE CONDUCTOR'S SHOES I'M NEBBER ROB AH HEN ROOST

DCCO

L.S. JONES
SALES MANAGER
LUMEN BEARING CO.

IF THAT BALL WERE ONLY NO 15 GEAR BRONZE I'D MAKE THOSE WORMS TURN

LOOK AT THE SHOT HE IS TRYING

HE HAS THE BRASS ALL RIGHT. I GUESS I SHOULD HAVE SAID BRONZE

QUINCE HARDNESS 100

LUBRICATION 100

WE'RE JUST HERE - TO FILL - UP - SPACE. BUT - JONES - WE FILL THE - VIT - AL - PLACE.

SETH KLEIN
SALES MANAGER
FEDDERS MFG. CO.

SIGN HERE

SETH KLEIN IS WELL KNOWN AS A HUNTER HE ALSO LAYS A SALES PLAN BUT THOSE WHO KNOW OF HIS PHONESS SMILE BROADLY WHEN MENTIONING SAME. FOR THE DUCKLINGS WENT ON UNPROTESTED BUT THE DOAT HE RACE FOWNE TO RELATE WITH TREATMENT ROTES A HOLE IN HER BOTTOM MET A SAD AND MOST HORRIBLE FATE. SETH'S FACE IS AN ADD FOR HIS CALLING PLUS FOR IT SURELY RADIATES HIS BUSINESS AND RADIATING NOW IS DUCKNESS HE'S MORE SKILLED WITH HIS PEN THAN A GUN

YESSIR

S-O-S

A MIGHTY HUNTER, BUT NOT OF DUCKS.

R.J. BURROWS
SALES MANAGER
CELFOR TOOL CO.

NO SUCH THING AS SCARCITY OF MATERIAL FOR BURROWS

CELFOR TOOL CO.

A.M. PEARSON
SALES MANAGER
RUSH DELIVERY CAR CO.

COME TO TOLEDO AT ONCE

SCHEDULE

ON HEAVENS I'VE LOST MY SCHEDULE

DIPLOMA IN EFFICIENCY COURSE

A NOTABLE CASE OF RUSH AND EFFICIENCY COMBINED

Interviews and Stories of Successful Truck Dealers In All Parts of the United States

The Motor Truck Dealer and Factory Branch Situation in the Quaker City. What Some of the Managers Have to Say

By CHAS. H. SPENCER

THE educational development of the user of the motor truck was placed in the hands of the pioneer dealer. In the earlier days of introducing commercial cars there were many difficulties to surmount. Training and experience, however, have brought about the desired result. The merchant has found that certain types of motor trucks are an essential factor in the efficient conduct of his business. While the dealer is looked upon as a necessity. The motor truck dealer has gone a step farther than doling out parts to meet the customer's needs. In the eyes of some of the motor truck men the dealer has been inconsistently liberal, and this same liberality has been accepted by some customers as meaning that all dealers and motor truck representatives must see that the car sold is kept going, regardless of cost to the dealer and likewise regardless of abuses by the owner.

The motor truck dealer must have his opportunity of showing a profit, quite as much as any merchant in any other line of business. It is claimed that one way of doing this is to sell some type of pleasure car in conjunction with a motor truck, and to revise some of the existing policies put out by motor truck manufacturers.

As a Philadelphian I felt justly proud of my commission, when in visiting a few of the leading motor truck representatives for the *Commercial Car Journal*, I found that some of the most stately structures in Philadelphia were occupied by distributors of prominent commercial car manufacturers.

The larger Broad street interests visited were the Packard Motor Car Co., of Philadelphia; the White Co. and the Buick Motor Car Co. While on Market street, the Foss-Hughes Co. and the Locomobile Co. were called upon. Another concern interviewed was the Bartlett Garages.

I sighted a grievance upon telling Mr. W. W. Metcalf, general selling manager of the Bartlett Garages, that I wanted to know his candid opinion of the dealer situation in relation to the user, particularly as Mr. Metcalf is looked upon as an authority in the Philadelphia territory. He has served six years in selling motor cars, and is secretary of the Motor Truck Association of Philadelphia.

Mr. Metcalf asks: "Why should a dealer be responsible for all the inconsistencies and foolhardiness of the average motor truck driver?" He viewed the situation as follows: "The merchant buys a motor truck and looks upon it as a device which must be kept constantly moving regardless of road conditions and season's emergencies, and is indifferent to the dealer's systematic requests to bring the car in for inspection. The merchant too often requires the driver to spend all the time working the car in fulfilling an excessive

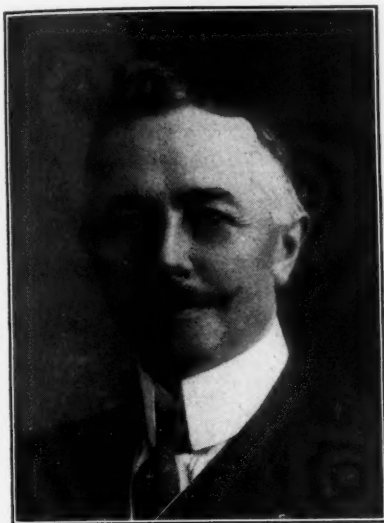


Interior and Exterior Views of the Bartlett Garages

This is the largest electric charging station and electric vehicle garage in the city of Philadelphia. The company also handles gasoline trucks, separate shops being maintained for the gasoline and electric trucks

The CCJ brings greatest returns to advertisers because of largest circulation among quantity buyers

delivery schedule, with no margin of time given to investigate the mechanical workings of the car. So long as it seems to run all right the supposition is that the car does not need attention. In an investment of \$3000, or a similar amount paid for a piece of machinery, this same merchant will have expert care and every attention given by well-paid mechanics. But when it comes to a motor truck the care and attention factors become negligible, even when the dealer pays an excessive amount to maintain systems of inspection, which should forestall a situation of a disabled



W. W. METCALF
Manager of the Bartlett Garages

motor truck. The merchant is notified that the truck needs attention, but frequently he won't allow the car sufficient time from service to repair the fault. It soon becomes a break, and then when the break occurs he cries he has been cheated. Here's where the foolish factory yearly guarantee comes in. The merchant immediately claims the break is in a defective part. If 75 per cent. of these claims obtain, what becomes of the dealer? The factory may in some cases stand the cost. But the dealer's claim for service ends."

Mr. Metcalf believes the remedy to be in the dealer's demand for a three-months guarantee on all motor truck parts. The owner would immediately become more careful of the conduct of his car; at least he would become more consistently susceptible to the dealer inspection report, and when a demand was made for the immediate care of a car's improperly working part, he would heed the demand and see that the cause for complaint was rectified.

How Refusing to Sell Made a Sale

Mr. Metcalf is a strong advocate for service—"the kind that serves," not the empty talk of promises. He further believes that the healthy growth of the motor truck industry lies in strong selling personality and honest statement. "Understate rather than exaggerate" is an axiom which he strongly advocates. As an instance that Mr. Metcalf practices what he preaches, he explains how he sold more motor trucks by not selling one truck:

"One of our salesmen had brought a prospect to a point where he believed with a little 'office co-operation' he could close

up a sale for a truck with a grocer, who had been led to believe that he could substitute a motor for the one old horse he had used in his delivery department for fifteen years. When I arrived on the scene and made inquiries regarding the grocer's ideas of more expansion and discovered that his method of acquiring new business was by a boy soliciting orders on a bicycle, I told the honest old grocer that I did not believe he was in a position where the acquisition of a motor truck would prove sufficiently profitable for him to make the investment. He relied on my judgment, and by making an honest statement I acquired his good will. The result of several trucks sold later were traceable to the honest old grocer, who had not been forced to buy something for which he had no immediate need.

"On the other hand, I once had occasion with a road builder to demonstrate the value of two dump body trucks, each one to take the place of two two-horse teams. It required three trips a day for one double team to make a 4-mile haul, while each truck did ten trips a day, covering a distance of 80 miles, thus replacing 3 1/3 teams in a day's work of one truck. Such a buyer is a big booster because he has been honestly shown the efficiency of motor truck service, and also because all statements and claims were honestly fulfilled."

Another interesting point that Mr. Metcalf brought out was that it was highly unprofitable for a dealer to undertake to make a success out of the exclusive sale of a motor truck. He believes that this condition may change as new developments occur in the sale and use of commercial cars, but a dealer should also sell a good pleasure car in conjunction with a motor truck to make the dealer business a profitable one.

The Bartlett Garages, Inc., is located at 5 North Twenty-first street, Philadelphia, and is the largest electric charging station and electric vehicle garage in the city. They have given up the sale of two electric pleasure cars. They maintain separate shops for gasoline and electric cars. They represent the Kelley Springfield Motor Truck, the Automatic Transportation Co.'s Storage Battery Trucks. They also supply parts for the Federal Truck and the Brown Commercial Car and the Mais Motor Truck.

Service a Necessity, According to a Branch Manager

It was the united opinion of all managers visited by the writer that some sort of a service department must be maintained by every dealer who sold motor trucks, although each manager seemed to believe that a concern could go to extremes in the matter of giving service. Some maintain that a place for garaging the owner's car is not essential, and this is borne out by the fact that owners who pay several thousand dollars in an investment of motor trucks can usually also afford to maintain their individual garage.

When Mr. P. S. Russell, manager for the Buick Motor Car Co., located at 235 North Broad street, was approached concerning this subject he stated the situation as follows:

"While the effect of quality and price is by no means to be discounted, 'service' is

a powerful factor and worthy of no little consideration. By service is meant that effort on the part of the manufacturing department to aid the sales department, by the sales department to further the interests of the distributor, by the distributor to aid his agents, and by each and all of these to do their utmost to make every owner a satisfied one.

"The location of branch houses at various points throughout the United States and foreign countries is only for the extension of factory service. The Philadelphia branch deals with 137 dealers, selling cars through Pennsylvania, New Jersey, Maryland, Delaware. Eighty per cent. of these 137 dealers have been associated with the company for a period greater than five years. These dealers, knowing that their connection is a permanent one, do not hesitate to irrevocably couple their reputation with that of Buick. Because of this, a dealer's first thought is the desire to make the ownership of a Buick truck a profitable investment.

"The company's biggest asset to-day is its sales organization, purchased by reputation, retained by performance and strengthened by service."

Simplicity Keynote of White Service

Mr. J. D. Howley, manager of the White Company of Philadelphia, 216 North Broad street, believes that the definition of service to the White owners of Philadelphia is fittingly symbolized in the present spacious quarters which are occupied by this concern. The building is divided up into four floors, each containing 11,300 feet of space. The first floor is devoted to the inspection department and show rooms. The second floor is the shipping department and



J. V. HOWLEY
Manager of the White Company, Philadelphia, Pa.

offices; the third, repair department; fourth, lockers and racks for a full line of stock parts. No part of the building is devoted to garaging, as practically all White owners, many of whom own fleets of White cars, have their own facilities for the proper care and maintenance of the cars. Mr. Howley looks upon the service department as a plain necessity, the principal work of which is devoted to a simply arranged plan of inspection of the cars in service. A full set of filing cards is used as a record of the car's service, and

monthly postcards are sent out to all owners, advising at what time the car should be brought in for its monthly inspection. The keynote to the White system of service is "simplicity," and yet the scheme stands for positive and satisfactory results. When Mr. Howley came into this section four years ago to stir up business there were only 28 cars in the territory, while the number now in use totals very close to 1000. Mr. Howley believes the general favorable business trend, applicable to the motor truck industry, will hold good for some time to come.

Pierce-Arrow Philadelphia Agency One of Largest in Country

Mr. O. W. Doolittle, manager of the truck department of the Foss-Hughes Co., gives some interesting comments regarding the service employed in the care of Pierce-Arrow motor trucks. The building is located at the northeast corner of Twenty-first and Market streets, and is undoubtedly one of the largest agencies in the country. The Foss-Hughes Co. has its agents or branches in Wilmington, Del., Baltimore, Md., Washington, D. C., Providence, R. I., and Reading, Pa. On the first floor of the Philadelphia establishment ample space is provided for general overhauling work, with the exception of engine and transmission units. These are taken care of when complete overhauling jobs are required in special shops on the third floor. The first floor is also devoted to a garage and shop, and special equipment to serve special uses, like service car, spare wheels, emergency apparatus, etc., is largely used. The second floor is given over to office space, stock room, motor truck room and the main suite of offices. The third floor is devoted to the general overhaul of truck engines and transmission.

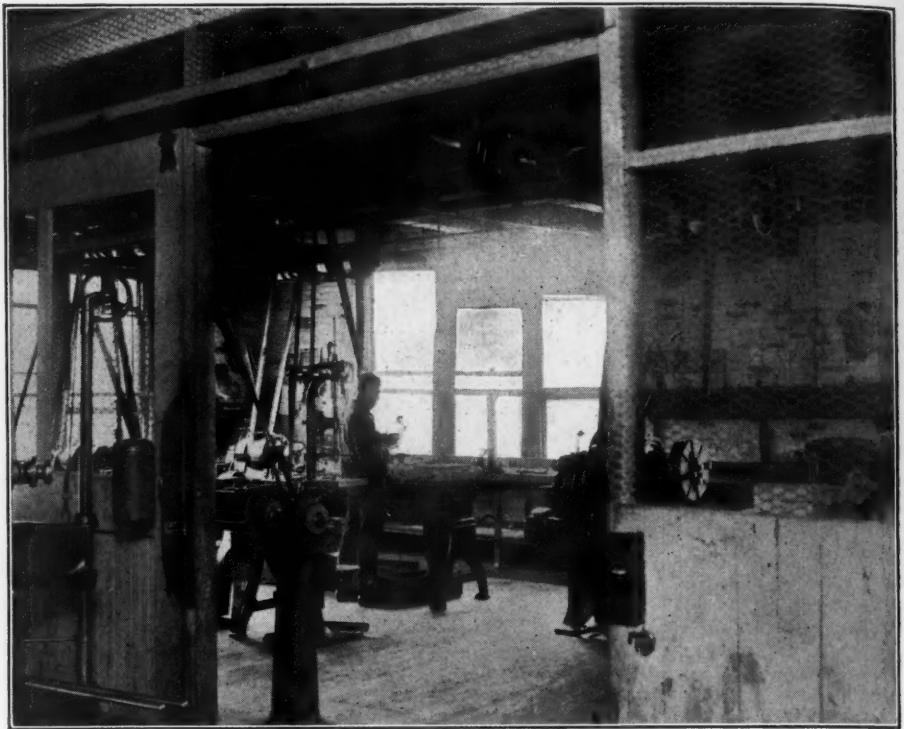
Free Inspection by Motorcycle Men

Mr. Doolittle said: "We do not find the garaging facilities of very much importance, as all of our customers garage their cars in their own buildings, or buildings leased to them for this purpose, which



Inexpensive Portable Crane Used by Foss-Hughes Company

This does away with large overhead channels or I-beams, such as used for ordinary traveling cranes. Can be readily moved from one part of the shop to another, and can be applied to any garage.



Machine Shop in the Truck Repair Department

The completeness of the equipment of the Foss-Hughes Company for service and repairs is very unusual, all the necessary and most up-to-date machinery being in service

would probably be more convenient for their business than our garage would be in a general way. Regarding our service plan, perhaps the most important feature of our truck service department is our inspection. The inspector is an emergency man as well. He is provided with a motorcycle and small kit of tools for incidental work, and is subject to the call of the office at any time, day or night. Through our card system we can put our finger on him at any time during the day and can get him on an emergency job within an hour from the time we receive the call anywhere within a radius of six to ten miles. In addition to this inspection system we have a service wagon, spare wheels, apparatus to use in case of wreck. Ordinarily two trucks to supply our trade with in case of their truck being laid up are held in readiness, for which service we make a charge. We also carry a full stock of necessary parts to take care of any reasonable emergency. The service of the inspector, so far, has been without charge, outside of any general repair work, in which case a charge is made."

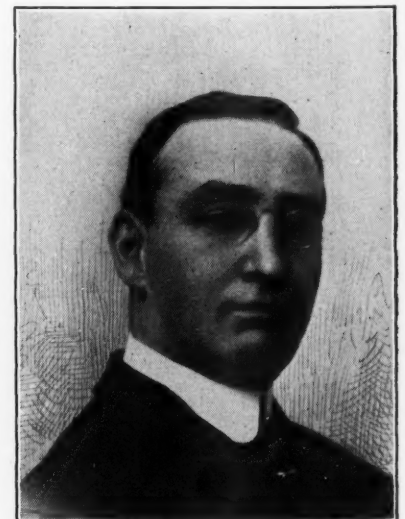
Agency Can Decide, Branch Must Write

When asked his views concerning the agency contract, Mr. Doolittle stated: "So far as the agency contract is concerned, as compared to a factory branch, we think the agency plan is the most satisfactory, as it puts the entire responsibility up to the local representative in many matters instead of having them submitted to the factory for approval or disapproval. It also facilitates the matter of many questions that come up as to policy, etc., and as these matters are of such a varied nature we believe that a quick settlement and a full disposition of any discussion at once to be advisable and advantageous. As to a dealer's garaging facilities being a good sales talking point, we do not consider that these facilities bear any material importance from a sales view-

point. Ample shop facilities being all that is required to render proper service to a purchaser, together with our inspection system, a complete parts department, and keeping always in readiness one or more trucks in stock, which are used as service trucks for the benefit of our owners in case of a temporary lay-up."

Make Explanation at Time of Breakage

When asked if the Foss-Hughes Co. encounter any unusual demand on the part of their customers for broken parts under a guarantee, Mr. Doolittle said: "We have never experienced very much difficulty in disposing of a customers demands for broken parts under our guarantee. As a matter of fact, the replacement of parts under the guarantee we use is such a negligible quantity as never to give any trouble



O. W. DOOLITTLE

Manager Truck Department Foss-Hughes Company, Philadelphia, Pa., one of the largest truck agencies in the city

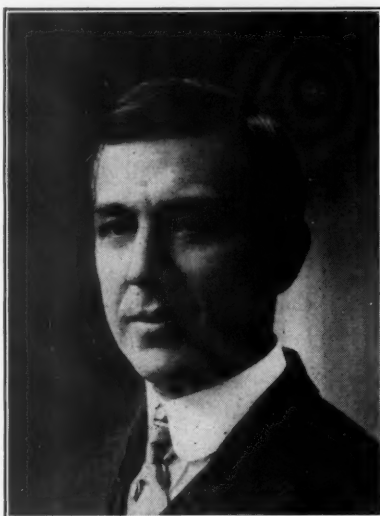


The Pierce-Arrow Home in Philadelphia

This enormous building maintains on the first floor the salesrooms of both pleasure cars and trucks, as the agency combines both, and on the upper floors the offices, service and repair departments and storage. It is located on Market Street near Twenty-first, which is apparently destined to be the center of the automobile retail section in the near future.

or annoyance, and the amount that we are forced to charge to policy during the year has been so small that we have not considered it of any serious importance. We have not found our customers unreasonable in cases of this kind, and we believe if they are taken care of properly and explanation made at time breakage occurs, that they will not be unreasonable in their demands. They are coming to know more and more that motor trucks will wear and break down just the same as any other piece of machinery, and that it is not up to the manufacturer to make free replacements on all breakage or wear due to ordinary service.

"The elimination of selling costs is a hard thing to do in any business, particularly in the truck business. The expense of demonstration has always been a 'bugbear,' and it probably will continue to be so. However, at the present time we find this abuse is not nearly so incessant as it was a few years ago, and we are doing everything possible to eliminate it. I believe if some co-operative plan were adopted for the elimination of free demonstrations it would work out to the general good. We have no objection to demonstrating to a real prospect who is going to buy some kind of a truck, but we are decidedly opposed to demonstrating to a company who, finding that they want some hauling done in an emergency, pick the motor truck manufacturer to do so under the guise of a demonstration. I don't think that the selling costs need necessarily be an excessive feature if closely watched and properly handled as to abuse. Of course, the matter of high rentals, etc., may always be more or less of an expense in the sale of trucks. We have a very large pleasure car business, which, of course, stands a large proportion of the expense. Were it not for this we would necessarily have to have smaller quarters and probably different facilities entirely for taking care of our work, and it would be much harder from a shop viewpoint to carry on our business and have the shop



F. S. COLEMAN

Manager Philadelphia Truck Department
Locomobile Company of America

department break anywhere near even. It has been our policy to have all of our departments show a profit in shop work, just the same as in the sale of a motor truck. It is an investment and expense carrying a large overhead and replacement of tools, insurance and men who are or may be idle a large percentage of the time, due to the work being of such a nature as not to keep them continually on the job. And in order to retain good men in the service it is necessary to give them permanent employment."

Inexpensive Portable Crane

One of the mechanical features of interest employed in the shops of the Foss-Hughes Co. is a portable crane. It is a very simple device and does away with large overhead channel or I-beams, which is a common method in connection with the use of traveling crane. The device is comparatively inexpensive for this class of equipment, and as it is not ungainly or

unwieldy in handling, it is a garage feature which could be readily applied to the service department of many garages. We show a view of this machine in operation.

Factory-Branch Side of Question

Mr. F. S. Coleman, manager of the Philadelphia truck department of the Locomobile Co. of America branch, with its sales and service station located at 2314-22 Market street, commented on the motor truck situation as pertains to the Locomobile interests as follows: "Our building has four floors and large basement with entrance on Ludlow street. This floor is used as garage and service station. The first, or main, floor, with entrance on Market street, is used for salesroom and offices. The second floor is used principally for a stockroom, a small portion, however, being reserved for the used car department salesroom. Third floor is used for the mechanical department of used cars, while the fourth floor contains a mechanical department and a machine shop. Our garaging facilities are approximately 30 cars. We have, however, no special features or systems of garaging, as our customers have not called upon us at any time for special service. In our service plans we work along well defined lines, such as covered by our guarantee, which calls for the replacement of all defective parts free of charge. We also have a monthly inspection system which is employed without any inconvenience to the owner or delay of the truck in operation."

Branch Deals Through Agents

"Working through our direct factory branches in all sections of the country, we deal through sub-agencies only, each agency operating in a territory covered by a branch, dealing with that branch instead of direct with the factory. This, we find, places each owner in direct touch with the branch in his territory instead of having to depend upon a dealer, who may or may not be handling the same truck in the next few



Philadelphia Locomobile Branch

This large fireproof building on Market Street, is the home of the Locomobile Company of America, in Philadelphia. Attention is called especially to the lighting facilities, almost the entire front of the building being of glass.



Spacious Doorway of the Locomobile Service Station

This shows one of the modern entrances suitable for the largest sized commercial cars

months, or who may not give the necessary attention to the company's policy of periodical car inspection. We do not believe it is essential, however, that a dealer requires garaging facilities, as we find in 99 per cent. of cases that the owner has no desire to garage with any one other than his own organization. We do believe, however, that the dealer must be so equipped in a mechanical line, and with the necessary men, to take care of any matters of service that may arise in his immediate territory, and this, we believe, will have a considerable influence on the obtaining of orders for trucks in his vicinity, while back of him in his territory stands the resources and helpful co-operation of a factory branch. When a truck first goes into operation we introduce our inspection system, which takes place every two weeks for at least six weeks, so that the care and operation of the car gets started along the right lines.

We are pleased to state that business indications point to a very wholesome increase in demand. Our production in the past has been limited. We have increased our production facilities, and with the inquiries which are coming to us daily, we anticipate an increase of sales in this territory of several hundred per cent.

Philadelphia Packard Agency

It is probably not a generally known fact that the Packard Motor Car Co., of Philadelphia, located at 317 and 321 North Broad street, is a separate company from the parent name. Mr. Lee Eastman is the general manager. The building is a very stately structure of eight stories and is considered one of the finest of its kind in the world. The first floor comprises a very spacious showroom with adjoining offices of the manager, sales force and technical staff. The rear of the first floor is devoted to a department of "Packard Service." This service department is open day and night. The motor truck department offices, together with a suite of private offices, occupy one side of the third floor, while the fourth floor is used for the storage of bodies and cars. The fifth and sixth floors are devoted to the coach

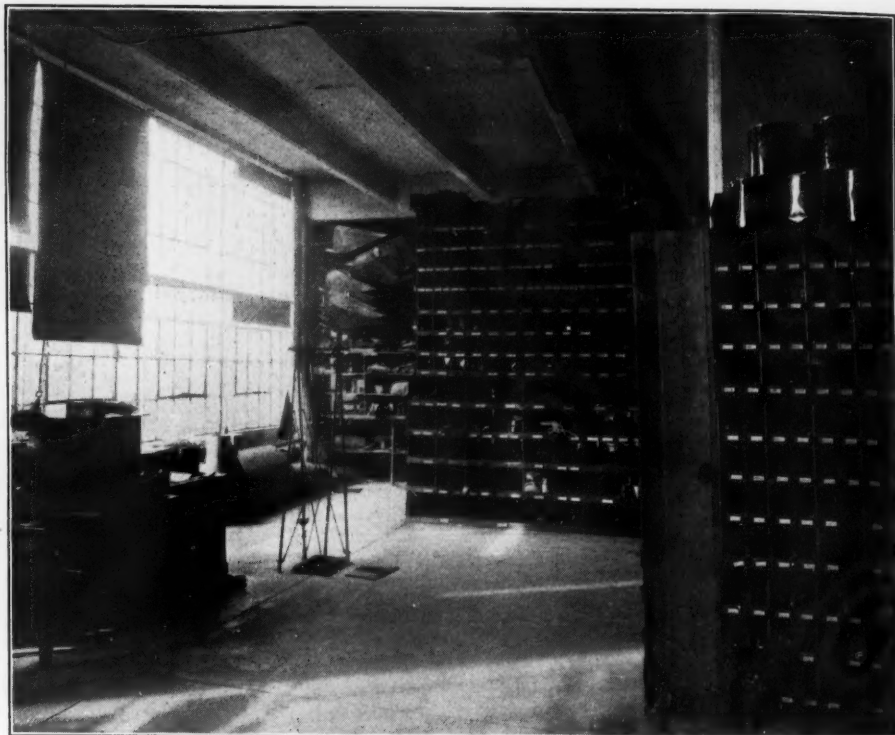
department. In this department are turned out some of the finest specimens of the coach builder's art in point of highly finished bodies and exquisitely completed coach interiors. The seventh and eighth floors go to make up the complete repair shop—the eighth floor being designed with a ceiling 18 feet in height for the accommodation of exceedingly high bodied motor trucks.

Owners Notified If Upkeep of Truck Is Above Average

Mr. Eastman in commenting upon the Packard program of service described the

it will bring in the open market. This amount is then deducted from the cost of the new truck and turned over to the owner. Most Packard users maintain their own garages. This obviates the necessity of the company carrying an overhead, which is always necessary where a dealer lives up to a policy of providing all customers with garaging service.

Mr. Eastman believes it is necessary for a dealer selling a commercial car also to acquire the agency of a pleasure car, and in this way the important item of overhead charges may assume a divided responsibility.

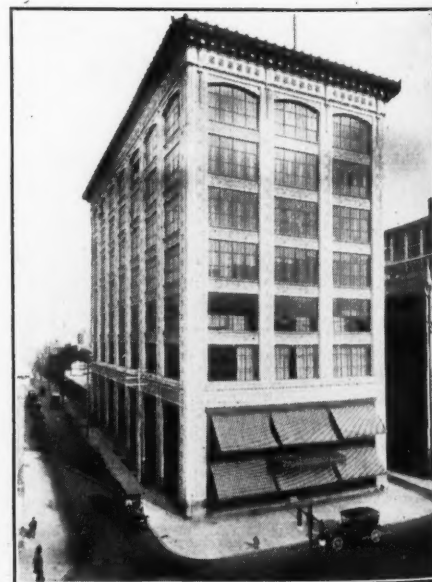


Corner of the Locomobile Stock Room

The unusual feature of this stock room is perhaps the abundance of light, which is so often lacking in rooms used for this purpose

monthly inspection plan of all Packard cars in the Philadelphia territory as being one of the necessary phases of a motor truck service program. Very elaborate historical records are kept of each car. The customer likewise keeps records, which are accessible to the Packard organization. In this way when repair work and upkeep costs creep above an average amount, these charges are looked upon by the Packard organization as excessive. The owner's attention is immediately called to the matter, the fault is traced down and is at once rectified. In this way any possible excessive charges are not allowed to dominate maintenance costs. As a result of this co-operative vigil operative charges do not show excessive variations.

The subject of trade-ins was touched upon by Mr. Eastman. The Packard policy in this connection is to make no fictitious allowances for trade-ins. Values are set by the public. The plan works out something as follows: When a prospect desires to purchase a truck and has another type of car which must first be disposed of, the "foreign" car is taken over to be disposed of on the basis that the car is worth what



The Packard Philadelphia Home

This building is almost unique as being built from the ground up, and fitted solely for the purpose for which it is being used. Its numerous floors provide luxurious salesrooms, ample service and repair-shop facilities.

The House That Quality Built

By H. G. BLODGETT



SHUT your eyes for a second—don't look at the illustrations. Now, can you imagine an "automobile store" which in itself, exclusive of stock, represents an investment of something like \$200,000? Now open your eyes and look around at what is probably the most complete and perfectly appointed dealer's establishment in the Middle West, if not in the entire country. The plant of the Packard Missouri Motor Co., situated in the heart of the automobile district of St. Louis, on the single great automobile thoroughfare of the city, has been said, by authorities, to be the finest establishment of its kind in the world. It is strictly a dealer proposition, holding exactly the same relations with the factory as does the Packard agent in Timbucto or Medicine Hat. Its plant, its employees, its methods, its president, all breathe of the spirit which has been the life-blood of this business, the spirit of "quality." This truly is "The House that Quality Built."

And from the start the commercial car has been considered quite as important as the pleasure car. In the ornate, high-ceiled show room a monster truck, stark naked in its war paint of somber gray, holds forth unabashed amidst the luxurious limousine, the speedy roadster and the "comfy" coupe. As Mr. Butcher, or Baker or Candlestick Maker spins down Locust Street the business-like truck in its priming coat shouts out "Look" through the spacious show windows as loudly as does its resplendent sister, Miss Touring Car. Mr. W. J. Parrish, president of the company, says it pays to feature trucks. A census of the commercial cars sold in the St. Louis territory during the past few years would indicate that he tells the truth, because a fellow bent on "asking the man who owns one" has only to stand on any busy corner a minute or two and he is sure to see a Packard truck go whizzing past.

Few commercial car dealers will ever be in a position to adopt the features of this great business in their entirety. In passing, however, it might be said that at the present time two dealers are building plants which are almost exact duplicates of it. But some of the details in operating this great plant, details that are helping mightily to make the immense outlay for equipment a profitable investment, can be adapted to the business of thousands of dealers, large and small, whether they have a few hundred dollars or a million back of them.

The Show Room

Everywhere, from the cathedral-like show room to the repair shop of the third-floor service department, is evidence of the watch-word, "Quality First." Thorough perfection in display, in sales follow-up system, in the service rendered truck owners, in record keeping, in administration of the business and in stock keeping are possible in the conduct of any commercial car business, whether the annual sales be three cars or thirty.

First consider the show room. Accessibility and good light are the most important considerations. This show room is

rich in both. Daily it greets every automobile owner in St. Louis who makes the trip down town. And the greeting is not of the tight-lipped sort—two hundred feet of plate glass show windows are rather an open-armed invitation. The Packard Missouri Motor Co.'s show room is two full stories high. In the rear, out of the range of the camera at the right, are the general offices. On the balcony in the rear and below it behind a railing are salesmen's desks. There's no closed door marked "Private" to greet the prospective truck buyer and make him feel like an "outsider."



W. J. PARRISH

President of the Packard Missouri Motor Company

The Garage and Service Departments

About two-thirds of the ground floor of the building, in the rear of the show room and offices, is given over to the garage. The rear section of the second floor is used for storage purposes, and the entire third floor is occupied by the service department, consisting of stock room and repair department. A mammoth elevator, large enough to carry the heaviest truck, connects the garage with the service department. In one of the illustrations a driver is shown "throwing her into second" as he drives a heavy truck out of the elevator into the garage. At the left of this illustration will be noted a corner of the garage partitioned off with head-high glass panels. This is an accessory display room, readily accessible to owners and drivers who may enter the garage.

An important element in building a growing commercial car business is serv-

ice. An immense industrial plant might be tied up if its delivery facilities should be out of commission. Hence it is important that repairs be made quickly and that a dealer be prepared to supply a "service car" for rush hauling in the meantime. The success of the Packard Missouri Motor Co. in meeting these requirements keeps its commercial cars "sold," and at the same time brings its customers back when they are in the market for another car.

Keeping Tabs on the Stock

Immediate repairs mean a complete stock of parts, and plenty of them. One of the illustrations shows a corner of this company's stock room. The dealer who "can't keep track of" a hundred dollars' worth of small repair parts can imagine what this stock room manager is up against when he realizes that in the hundreds of bins which appear in this picture, and in racks and on the floor beyond, there is never less than \$28,000 worth of repair parts, both light and heavy. And not even the smallest bolt enters or leaves this stock room unrecorded. Under the system of perpetual inventory which is in force the exact number of repair parts of each of thousands of types that are ordered, used and on hand can be determined immediately by the stock-keeper without leaving his desk. The exact car on which each part was used can also be likewise determined. A carefully worked out system of records makes this detailed information readily available. And note this—the stock room is partitioned off from the repair department. Parts are handed out through a counter resembling that of a bank teller. All doors to the stock room are always kept locked, both during working hours and after.

The stock room bins, as shown in the illustration, are of a specially designed steel construction. They are adjustable, and can be set up to accommodate either one large repair part or a hundred small bolts, as the case may be. The ceiling of this stockroom picture illustrates the construction of the building, which is solid reinforced concrete throughout.

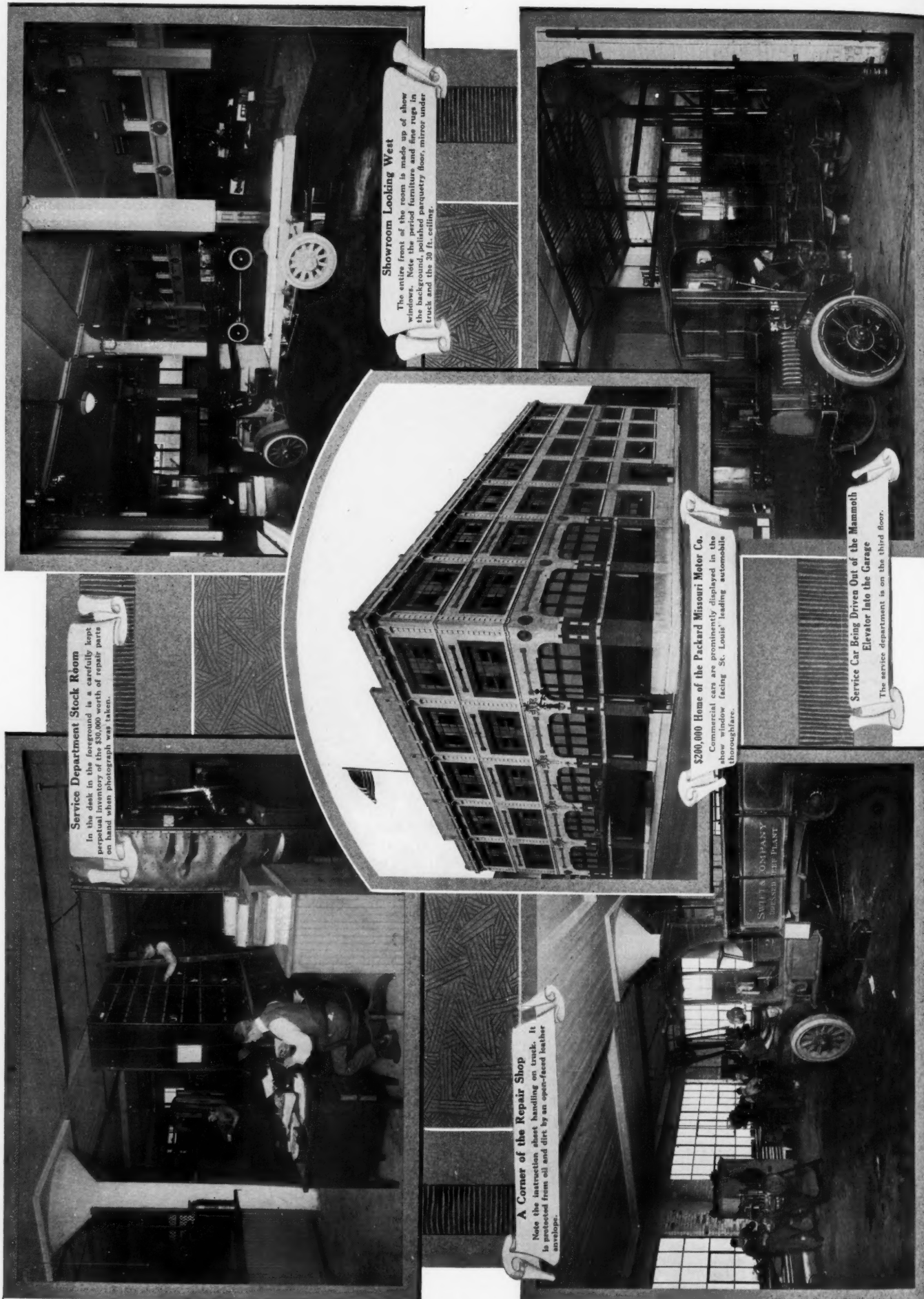
A study of the various forms and blanks, which are reproduced herewith, will reveal at least part of the secret of the "service department satisfaction" that this company hands out. From the standpoint of profit and loss the "Stock Record Sheet" is all important. It shows the cost and list price of all parts, the name of the part, according to which the sheets are filed in loose-leaf book form, the part number, the bin number, and the "danger limit" below

Form 78 51-512-C																											
Price				Stock Record Sheet No.				Part No.				List				Name				Bin No.				Danger Limit			
ON ORDER		RECEIPTS		DISBURSEMENTS		ON ORDER		RECEIPTS		DISBURSEMENTS		ON ORDER		RECEIPTS		DISBURSEMENTS		ON ORDER		RECEIPTS		DISBURSEMENTS					
DATE	QTY	AMT	DATE	QTY	AMT	DATE	QTY	AMT	DATE	QTY	AMT	DATE	QTY	AMT	DATE	QTY	AMT	DATE	QTY	AMT	DATE	QTY	AMT				


Loose Leaf Stock Record Sheet

This is the keystone of the systematic and economical stock-keeping. It provides a perpetual inventory of \$30,000 worth of repair parts. Size of sheet 9 1/4 in. x 12 in.

The CCJ has most readers because it gives most information



Form 75



Packard Missouri Motor Co.

Job No. _____ Name _____

Model _____ Order by _____ Received by _____

Car In _____ Premised _____

INSTRUCTIONS

Manufacturer's Stamp Date Recd. Salesman's Initials

The above instructions must be strictly followed.

If order does not cover the work completely, communicate with the undersigned.

Form 68

REPAIR ORDER

N^o 7699

PACKARD MISSOURI MOTOR COMPANY

Date _____ 19____

You are authorized to make the following repairs on my Packard Car or Truck No. _____, for which work I agree to pay, upon receipt of invoice at your established rate; the total bill not to exceed \$_____, which amount you estimate the work will cost.

It is agreed that you are not responsible for damage or loss of cars left in your care due to fire, casualty, burglary, or other causes beyond your control, nor for any articles left in the car. The estimated cost does not include any additional work which may be ordered done. Parts removed from cars or trucks will be held two days only, for owner's disposition.

Owner _____ By _____

Confirming telephone conversation of _____ between Mr. _____ and Mr. _____
we are proceeding with above work as per estimate.

PACKARD MISSOURI MOTOR COMPANY

The foreman of the shop and the workman on the job make out a "Repair Order Requisition" for all parts required on the job, one copy of which is retained in the stock room files and the other placed in the repair department folder for that job. The timekeeper also punches the time, "in and out," for each workman on each job, and all time cards for a single job are filed in the job folder. Then when the job is completed it is a simple matter for the service department foreman to fill out the "Material and Labor Record" for each job, and from this record the business office makes out its invoice. After the job is completed this job folder, with its contents intact, is filed away permanently for reference.

All orders for parts sold over the counter, or for repair work not done in the company's service department, are made out on a special order blank, which is also reproduced herewith.

which experience has shown the stock of parts should not be allowed to get. At the left is the record of the order sent to the factory and then the record of the receipt of the shipment. At the right are three columns for recording each disbursement of that part, the date, the "repair order requisition" number which in turn shows what car the part is used on, the number of parts called for, and the balance or stock on hand after the disbursement.

job shall be kept. First a copy of the original owner's order goes into this folder. The foreman makes out a "job instruction sheet," in triplicate. One copy goes into the office files, one remains in the job folder, and one, on heavy manila board, is attached to the car on which the work is to be done. This one remains on the job until the work is completed, so that the

From start to finish all service work is handled right, and recorded right. Nothing is done on hearsay or verbal order. There must be a black and white record of every request and everything done. In the first place no repair work is commenced until a "Repair Order" has been filled out and signed either by the truck owner or his driver. No driver's signature is accepted until it has been confirmed by telephone conversation with the owner. No repair work is accepted until the service department has made a thorough examination and estimated a total cost above which the work ought not to run. In case unforeseen difficulties are encountered, or additional work is required, the matter is adjusted with the owner before the additional work is done and an additional order is obtained. In this way suspicion that a bill is being padded, or that he has been made the victim of an overcharge, is entirely eliminated from the owner. These repair orders are made in triplicate, one being sent to the owner.

Immediately when a service order has been made out and the job is accepted by the repair department, a folder for that job is made out in which all records of that

[illegible]

All repair parts are ordered by workmen on this slip. No parts are issued from stock room except on this requisition or "over the counter" order. Size of slip 8 $\frac{5}{8}$ in. x 6 $\frac{1}{2}$ in.

Interviews With Leading New York Dealers

By C. P. SHATTUCK



IN these days of power transportation presenting unlimited opportunities to the dealer in commercial motor cars, there are some, who although well versed in the technical knowledge of the motor truck, an important factor in salesmanship in that it has much to do with capacity efficiency of the vehicle, hesitate to invest capital, believing that it is not a profitable investment. That the merchandizing of commercial cars is profitable is exemplified by the large number of successful agencies conducted in New York City, where the dealer is under a big overhead expense and where competition is exceedingly keen. If it be possible for these concerns to achieve success it is but natural to assume that the dealer in the small cities and towns where the overhead expense is considerably less, can expect to realize a larger return upon his investment.

Apropos of the general business conditions, if there be a dealer in New York City who is not enthusiastic over the pos-

sibilities of the mechanical transport, and who does not predict a big business in the future, the representative of THE COMMERCIAL CAR JOURNAL did not meet him, and the writer obtained the opinions of the majority of the fifty odd factory representatives, dealers and sub-agents.

The dealers interviewed were not selected, and included recently as well as long established agencies. Opinions were given by the dealer selling a light delivery car, also the agent handling a truck of the maximum capacity. The canvass was conducted primarily to ascertain the views of the dealers as a whole, as to the general, business conditions in the truck industry as indicated by the territory covered. The interviews brought out the following interesting features:

The greater number of agents were attracted by the possibilities of the modern method of transportation and the unlimited opportunities it afforded.

The majority of dealers—factory representatives excepted—advocate a larger commission or discount because of the

large overhead expense in New York City. It was suggested by some that a sliding scale be adopted.

A large number of agents suggested that the factory allow the dealer more time, and that the draft and deposit method be modified so as to enable them to turn over their money.

That service was an important factor and that it largely influenced the prospect; in fact, some dealers credit service with closing difficult sales and when competition was keen.

There was an unanimous disapproval of the old-time demonstration.

Talking the cost of horse-drawn delivery to prospects is seldom necessary, as the average business man is educated to the economy and advantages of the truck.

That the successful salesman must be capable of analyzing the work of a given number of horse-drawn equipments in any given business and be capable of showing the prospect how and where the truck will prove more advantageous than the horse.

COMMERCIAL CAR HAS STRONGER FUTURE THAN PLEASURE CAR

The R. E. Taylor Corp., 427 West Forty-second street, New York City, eastern distributors of the Garford line of commercial cars, is an example of a progressive concern which, having live wires at its head, has achieved success in the merchandising of motor trucks in New York City and surrounding territory. The company broke all records last month, and J. B. Cowen, vice president and general manager, is enthusiastic over the possibilities of the future. "They are tremendous, unlimited," he said. "The commercial car has a stronger future than the pleasure car."

The sales policy is well defined and is a stable one. A salesman is not allowed to sell trucks merely for boosting his sales, and is censured if he attempts to close with the prospect on his first call, for the heads of the company maintain that no salesman can advise as to the capacity, etc., of the truck until the business of the prospect has been carefully analyzed. The sale of a truck is, in the opinion of Mr. Cowen, who has had an extensive experience in building up sales organizations, the beginning of a relationship with the customer that might or should lead to repeat orders, or at least a testimonial or a recommendation. The company will not tolerate deception on the part of its salesmen, and this applies to the statements made by them to prospects as well as in their reports.

Mr. Cowen has built up a sales force of thirty, and these include experienced truck salesmen and the scouts. The last named are utilized to economize the time of the salesmen by developing prospects and to obtain complete data as to the prospect's business. It is the duty of the scout to ascertain how the prospect hauls his goods, the horse-drawn equipment employed, the

attitude of the prospect on trucks and what would be the best time to approach him.

The scout is exceedingly useful in that he supplies the greater number of the leads. He makes a house-to-house canvass of the districts to which he is assigned and gathers complete information, which is in-



Exterior of Garford New York Station

corporated in a daily report. These reports are gone over by experts and the useless names eliminated. By this system the R. E. Taylor Corp. has an authentic list of prospects in the city. In addition to the above-named duties the scout keeps in touch with building contracts as well as any incident that might possibly afford the salesman an opportunity to analyze a haulage problem.

The follow-up system employed by the company is most complete, and the salesmen are well supported by the publicity department. The active list of the follow-up campaign includes the prospect that has not bought, and he receives a weekly letter. If the prospect purchases a competing truck, his name is placed on the monthly follow-up list, and it remains there for a period of three years unless he purchases a Garford truck. If a prospect buys a Garford he receives follow-up service of a different character, it including educational data, suggestions as to the care of the truck, etc. The system includes a file of letters written by salesmen. Any letter is accessible, and all come back within a certain number of days, preventing oversight in correspondence.

Not only does the R. E. Taylor Corp. supervise the sales policy of its employees, but it utilizes two experts, who assist the agencies and sub-agencies. Generally these are graduates of the garage or repair shop, and not familiar with the business selling methods so necessary in merchandising trucks. The experts demonstrate to the agents how to obtain and follow up leads and explain service after a prospect has been sold. The sub-agent is well supplied with literature supplied by the home office.

Every Garford salesman is required to keep in close touch with trucking contracts, such as road, building, etc., and these are followed up. What is termed creative selling is employed, a salesman frequently interesting a contractor in large hauling contracts, then selling him a fleet of trucks. Often contracts are secured and turned over to concerns operating Garford trucks. These instances are quoted to demonstrate the possibilities in the commercial car field and to show that similar opportunities can be created even in the small city and town by a progressive dealer.

Demonstrations are not favored by the R. E. Taylor Corp., but the company has not succeeded in entirely eliminating this feature. After a salesman has thoroughly investigated the hauling methods employed by the prospect and analyzed conditions as well as figured out costs, etc., of both equipments, the prospect is advised to rent a Garford truck for a day or two from

a call. Salesmen and the scouts assist in this work by reporting any noticeable trouble, and the owner, not the driver, receives a notice calling his attention to advisability of allowing the company to attend to the repair at once. A complete line of spare parts and units is carried in stock by the company, which employs high-grade mechanics and an experienced foreman in its

trucks in New York City. "I doubt if there is any other territory or section of the world that offers such vast opportunities for the sale of motor trucks as Greater New York and vicinity," stated Mr. Boldman. "There exist, however, many problems to be solved and more difficulties to be surmounted than will be found in other sections. The average New York business man is not only difficult of access, but it requires considerable tact on the part of the salesman to obtain an audience. After obtaining the appointment and audience, the salesman must make his proposition in a very few minutes. A salesman to achieve success in this city must not only know all about his truck and what it will do, etc., but he must also know the requirements of his prospect and to be capable of forcibly pointing out where the truck he represents can improve delivery methods and solve haulage problems."

Mr. Boldman was convinced in the days of reconstructing pleasure cars for haulage that the motor truck was vastly superior to horse-drawn equipment, and that the mechanical transport would ultimately replace the horse in practically every business. His first experience dates back to the days when it was necessary to build practically every part of the chassis. The high cost of material and labor quickly consumed his capital, and being unable to obtain support on a satisfactory basis, Mr. Boldman engaged as agent for a new concern then being organized in Detroit, taking Brooklyn and Long Island as territory. He continued as representative until the company experienced the same difficulties as did Mr. Boldman in manufacturing. "I did my best to induce the company to purchase the different units produced by well-known and reliable concerns to avoid a large outlay of capital," said Mr. Boldman, "but failed as did the company. The failure placed me in a very bad light with my customers, who experienced great difficulty in obtaining parts to say nothing of the cost, loss of time and service of the cars. This experience taught me that it was vitally important to be in a position to supply customers with parts and proper service should the company I represented fail."

After visiting and inspecting a number of factories Mr. Boldman decided upon the product of the Standard Motor Truck Co., of Detroit, at the head of which he found an old acquaintance, Albert Fisher, who was formerly one of the large stockholders of the concern that Mr. Boldman formerly represented. "Mr. Fisher saw the hand writing on the wall," said Mr. Boldman, "and purchased the Standard Co., which had just started to build one of the very first assembled trucks." After a period of traveling and establishing agencies, Mr. Boldman was appointed eastern distributor with headquarters at 250 West 54th Street, New York City, where he is now located.

He recalls his first sale of a commercial car, which was made to the Long Island Storage Warehouses of Brooklyn, and the car is still in service. As Mr. Boldman aptly puts it, "I am proud to say that I still retain the good will and friendship of this concern."

Mr. Boldman relates an interesting as well as amusing story of what he terms



Interior of Garford Salesroom

Showing executive offices and salesmen's desks toward the back

some contractor or customer; that is, if the prospect insists on facts not figures. This method is held to be advantageous for two reasons. It shows the prospect the efficiency of the truck and assists the owner who has a spare or an idle truck. Naturally these owners are a factor in obtaining prospects and closing sales.

The salesmen for the company include those who are mechanically versed, practically traction engineers. If, however, difficulty is experienced, the traction engineer of the company is called in, but this is the exception rather than the rule. If a salesman cannot close a sale, a difficult one for example, another is utilized who can present the advantages of the truck over the existing equipment in a different light. Mr. Cowen states that it is very seldom he is called upon to close a sale. He also believes in close association with his sales force, and his door is never closed on them. The heads of the company, R. E. Taylor, president, and J. B. Cowen, vice president and general manager, and the sales force may be likened to a large family.

The company is a strong advocate of service, maintaining four inspectors whose duties are to inspect trucks in the territory of the concern. The men inspect trucks at their garage, at the service stations of the company and on the street. The inspectors stop a truck if it does not sound right, and have a habit of turning up to look over the mechanism when the driver least expects

service stations. The R. E. Taylor Corp. watches the trucks of its customers very closely, and its policy is to anticipate wants rather than to remedy faults. Employees of the company must be courteous at all times, and this rule applies to the telephone and to letters.

A feature of the organization is the weekly salesmen's meetings, which are generally preceded by an educational talk by some technical expert familiar with the components of the chassis or its equipment. The complaints and suggestions of the salesmen are listened to and talked over. What is termed the trial selling test, consisting of one salesman attempting to sell another, is held at these meetings for the purpose of eliminating weak spots in the selling campaigns. The company publishes a monthly house organ and maintains a publicity department, in charge of Putnam Drew, who is a factor in the follow-up system.

BOLDMAN BELIEVES IN USING STANDARDIZED PARTS

HAVING a mechanical as well as selling experience with motor vehicles that began with the pleasure automobile, and having conducted experiments in rebuilding pleasure cars for transportation of all forms of merchandise, Edwin D. Boldman, eastern distributor for the Standard commercial cars, is thoroughly conversant with the problems that must be solved by the successful merchandiser of

his most difficult sale. "One of my salesmen reported to me that a well-known New York business concern on whom he was working, had decided on a truck and that the house refused to consider our line. This was on a Friday evening, so I informed the salesman that I would accompany him the next morning to see the head of the firm. My salesman stated that it was a waste of time, as the firm was busy and that as Saturday was a half holiday. He also volunteered the information that we would most likely be thrown out. However, I made the call at 9 o'clock, the salesman remaining outside for reasons of his

before taking a trolley for the city asked me what report he should make. I was so disgusted that I told him to tell his firm the truth, that it was my fault as I had no business to disconnect the governor and speed the truck. My feelings were not of the best when I arrived home after the tow, for I had lost the sale and in addition was soaked to the skin. The exposure and labor of carrying lumber kept me in bed three days, but out of curiosity I dropped in to see the prospect who enjoyed considerable amusement at my expense. I also met my competitor at the office, who informed me that I had a nerve

were hauled to the freight station and a load of paper and cardboard for making boxes or a load of sugar were brought back. The loaded panel body was then rolled on to the truck, and as many as three trips were made in supplying the city trade.

This arrangement eliminated the horse-drawn equipment as well as considerably improved the service to say nothing of saving the cost of haulage from the station. The truck equipment cost was as follows: Three and one-half ton Standard..

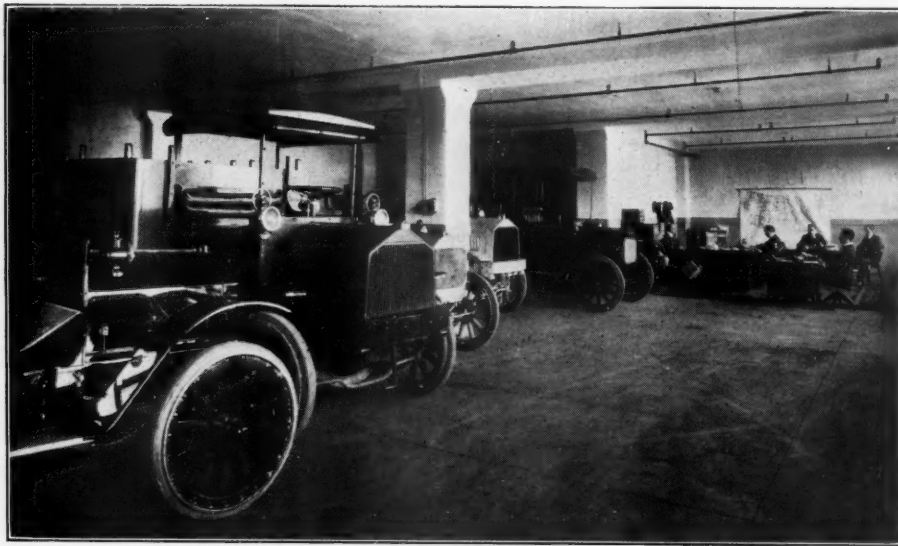
Chassis	\$2850
Rack Body	125
Panel Body Painting	300
Total	\$3275

The average daily cost of operating the truck including depreciation, insurance, fuel, oil, tires, driver, etc., was \$10.85. The truck averaged seventy miles a day. The cost of trucking and delivery by the horse-drawn equipment was in excess of \$20, consequently the truck effected a saving of \$10 a day or about \$3000 yearly.

Mr. Boldman believes that service depends entirely upon the type and make of truck. Some marketed are constructed in one plant and as the construction is more or less complicated, the average mechanic and driver is not familiar with the mechanism. This, says Mr. Boldman, necessitates an elaborate and expensive service station, the cost of maintenance of which naturally falls upon the owner of the truck. The Standard representative pointed out that all mechanics and most drivers were familiar with such well-known units as the Continental engine, Brown-Lipe gear set, Gemmer steering gear, Timken front axle, Timken-David Brown worm-drive rear axle, Spicer universal joints, etc., and that repairs and adjustments are quickly made, effecting a saving in labor to the owner.

In speaking of service Mr. Boldman stated that of the ninety odd trucks he has sold, some of them over three years old, those coming to the service station for repairs do not average more than one a month. The company carries a complete line of parts, even stocking the different units all assembled, so that quick replacements may be made. In addition there is a corps of expert workmen and a service car ready day and night to give service in any part of the territory covered by the company.

As a distributor, Mr. Boldman would not discuss his contract with the manufacturer, but believes that any maker who wishes to enter New York City, and desires to be successful, must be prepared to render every possible aid to his agent. "The day of shipping commercial cars and parts S. D. B. L. attached, is gone," opines Mr. Boldman, who stated that the manufacturer and agent must work shoulder to shoulder as their interests are identical. A failure on the part of the agent inflicts a serious injury on the manufacturer. "The manufacturer should first provide and maintain a substantial advertising campaign, consign show cars and parts, and leave the agent free to utilize the most of his profits in building up a good selling organization. Every car sold should sell another. A



Interior of Standard Truck Corporation Salesrooms

own. I succeeded in obtaining an audience with the head of the firm, who was upon my arrival reading the contract of a competitor of mine, and about to sign. I was informed that I had considerable nerve to try and sell a practically unknown truck against one that had an established reputation, to which I replied that they displayed more nerve than did I if they could assume that my competitor had a better truck than I did without looking at it, let alone allowing me to demonstrate. My argument resulted in a decision by the prospect to allow me to give a free demonstration on the following Monday. The result of my interview was a surprise to my salesman.

"On Monday my driver failed to show up, having been heavily 'overloaded' on Sunday," so I was compelled to drive. We made an early start with a load of fancy kiln dried lumber for some houses being constructed out near Mineola, L. I., twenty miles away. We made the run without incident and to the satisfaction of the expert sent out by the prospect. On our arrival it threatened rain, which would injure the lumber, so I pitched in, helping carry it indoors. As it started to rain on the way back, I disconnected the governor to make better speed. Shortly afterwards there was a crash and the motor stopped. "What was that" asked the expert? I informed him it was my hopes of selling his house a truck. An examination revealed a burned out bearing, causing a connecting rod to break, which so badly damaged the upper and lower crankcase that it was a case of a tow. The expert

to call after such a showing. All of this made me more determined to close that sale, and after two or three more interviews and postponements, I again met my competitor as I was entering the building of the prospect. My rival gracefully informed me that he would let me down easy by permitting me to enter first. On my way out I showed him the contract and a good sized check as a deposit. Afterwards I learned that it was my honesty that was a big factor in landing me the contract."

Mr. Boldman attributes his success to observing five rules. These are: A fair and square deal to the purchaser always tell the truth, never "knock" or speak ill of a competitor or his truck, know your proposition from beginning to end and boost it to a finish, and make no promises you cannot more than fulfill.

Analyzing the prospect's business and suggesting methods whereby a truck could be utilized to advantage is common according to Mr. Boldman, who cited a case of a candy manufacturer utilizing one two-horse and three single teams. His wagons stood for hours at the loading platform waiting to be loaded. This concern was supplied with a 3-ton Standard truck, equipped with a platform body 12 ft. 6 in. long by 6 ft. wide, and fitted with 3 ft. 6 in. side removable and tail racks, also a removable panel enclosed. The body was 12 ft. 6 in. long by 5 ft. 11 in. wide, built on rollers which fitted inside of two tracks built into the platform of the rack body, which could be unhooked and rolled onto the loading platform by the driver. By utilizing the racks a load of case goods

The CCJ has most advertisers because it gives them biggest returns

good selling organization is one of the greatest assets a manufacturer can possess," stated Mr. Boldman, who believes that the price of a truck is now beginning to be a considerable factor in selling. The average buyer is becoming well versed, and will not countenance old-time high prices, particularly parts, etc. Mr. Boldman predicts that trucks will eventually be sold at much lower prices for a number of reasons, but that any manufacturer endeavoring to reduce costs by cutting down the agent's commission, particularly where the cost of maintaining an agency and a service were high, as in New York City, and where it was essential to build up a high grade sales force, trade in cars, etc., would make a serious mistake.

In a large number of instances Mr. Boldman finds it highly necessary to be able to compare for the owners of one or two trucks the cost of truck operation with horse-drawn vehicles. Generally, it is a case of comparing the truck with another make. The distributor of the Standard called attention to a new condition in the motor truck industry, but an old one in other lines, and that is time payments or an extension of credit. Mr. Boldman is of the opinion that it has come to stay and that truck manufacturers will be compelled to meet it, possibly on modified terms or with more systematic conditions. And furthermore, the manufacturer who expects to achieve any great success must be prepared to cope with this condition.

Relative to present conditions and the outlook for the future, Mr. Boldman says:

"The indications in this territory for motor trucks never were brighter. The hundreds of thousands of horses which have been shipped abroad and the thousands more that are to follow, together with the wonderful period of prosperity which is sure to continue for years to come, war or no war, and for reasons too numerous to mention, will enable the motor truck industry to take its place among the leading industries of the country and to remain among them permanently. Many great improvements in the construction of trucks will be worked out and the manufacturer who overlooks the building up of a selling organization and the taking of proper care of domestic or home users of his product, will find himself bringing up in the rear ranks when the war is over."

Dealers In the National Capital

By LEE L. ROBINSON



THE one big question in connection with the commercial car industry, the question which overshadows all others directly or indirectly related to the industry, the future of the industry, is viewed from but one angle by agents and dealers in the District of Columbia, and that a most optimistic one. District of Columbia dealers, managers of direct factory branches and others in a position to sense the future of the commercial car business, almost invariably use the superlative in expressing their opinion as to the outlook for this line of cars.

There are different reasons why the manager or dealer in the District of Columbia should be in an excellent position to judge of this one angle of the industry. One is that they, as a rule, have a big scope of country under their supervision, representation in the reservation in which is located the National Capitol, thus usually furnishing a key to what is going on in the motor line, especially the business motor line, in that flourishing section of the United States known as the southeast division.

Often this representation extends to the far southern States. Therefore, when one of these managers or dealers turns loose an explosive and expressive "Excellent" in response to the formal query, "What are the indications in your territory as to the future of the commercial car industry?" there is little more to be said along this line. And when, without exception, replies as expressive and encouraging come from all to whom this query is put, a pretty fair line may be secured on conditions as they are expected to be. It is natural to assume, also, that conditions past and present, especially present, are just about as encouraging as the trade would expect to arouse such a feeling of optimism as to the future.

Another reason why conditions as viewed by those located in the commercial car line in the District of Columbia may be accepted as indicative of the conditions as they are now and as they are expected to be, is that the various executive departments of the Federal Government centered

here have given unqualified approval to the commercial car. The Federal Government is not a careless and non-discriminating buyer by any means, despite the fact that it is the greatest of all organizations on the Western Hemisphere. It buys only after careful calculation, after comparative tests, and after absolute proof of service is demonstrated.

And the Federal Government after all these, has surrendered to the proven efficiency of motor transportation wherever it is humanly possible to utilize such methods of transportation. The managers,



The Washington Republic Agency

dealers and salesmen in the District of Columbia have gone through the trying experience of converting the representatives of the Federal Government to the commercial car, and having done this, may say with full justification that what Uncle Sam has put the stamp of approval upon may be accepted by the rest of the business world as worthy of its acceptance.

Still again, commercial car representatives in Washington have almost daily opportunities for getting in touch with the views of the rest of the country touching commercial car conditions. This is possible, not as a result of expressions of visiting factory representatives, but as a result

of the ready acquiescence of members of the two houses of Congress from every State in the Union, based on observations made "back home," in the policy of the Government to motorize as fully as possible its transportation facilities. This acquiescence comes in the significant approval given items in appropriation bills calling for money with which to pay for this form of transportation.

Then there is left the commercial circles of the District of Columbia. These circles, to almost as full an extent as the public service, have adopted motor transportation for business purposes so generally as to make it very often unnecessary for a salesman to talk the horse cost of delivery these days when seeking to make a sale of a commercial car. Usually, it is a case of selling his truck in competition with some other truck, and here the mechanical end, the pulling power the cost of upkeep, the cost of fuel, etc., are the matters which must be handled. This condition as to Washington is true also as to business circles in the territory covered by the Washington agents and dealers heretofore referred to.

What Some Dealers Are Doing

G. C. Stevens, manager of the Washington branch of the Chicago Pneumatic Tool Co., manufacturers of Little Giant Motor Trucks, his territory embracing, in addition to the District of Columbia, numerous States to the south and southeast, said in reply to queries touching the present and prospective business of his branch that the best indication of what his company was doing in this territory was the renting of new and bigger quarters made absolutely necessary by trade conditions. Mr. Stevens' branch is now established at 471-473 Missouri avenue, the old location at 234 Fourteenth Street having, as suggested, been outgrown.

An interesting phase of the commercial car end is afforded by the experiences of the Cadillac agents here Cook & Stoddard, 1138 Connecticut avenue who sell for commercial purposes only the Cadillac chassis, on which purchasers may have built bodies to suit their various purposes. Examples of the use to which the Cadillac chassis is

daily being put in this connection is afforded by numerous ambulances, combination vans and ambulances, inspectors' wagons, used in the local engineer's department, etc.

This branch of the industry, according to Cook & Stoddard, which, of course is general throughout the country, is certain to become more and more popular. The selling of the chassis, alone, that purchasers may design their own body, naturally one suited particularly to their needs, in the view of different dealers here eliminates many of the problems confronting a salesman. For instance, if a business man has the suggestion put up to him that he may outline practically complete just the character of motor wagon he wants, it remains only to discuss with him the cost of such chassis, the probable cost of the body, the accomplishments which stand to the credit of other conveyances built under similar conditions, and the cost of operation, to lay the groundwork for a sale.

Still another angle is that presented by M. T. Wiggins, resident manager of the Locomobile Co. of America. Mr. Wiggins, who has been located in Washington since last July, prefaced his discussion of commercial car conditions, his experiences in selling, etc., by the statement that he gives most of his attention to the passenger end. However, when he does turn his attention to the business car end, according to Mr. Wiggins, he makes it plain to prospective purchasers that the Locomobile Co. builds trucks to order and that they come high. Therefore, if Mr. Customer is not inclined to pay a good price for the product, he is informed there is little chance of a trade being made. Granted that the cost will be well up, Mr. Wiggins says, he then proceeds to talk business. Recently the engineering department of the city of Baltimore was in the market for a specially constructed 6-ton truck, fitted with a 3-ton crane, a stake pulling apparatus and a dumping body; also a trailer which would pick up and carry two to three sections of pipe.

Here was a special prospect. Specifications were submitted, and the usual references given. The order was secured. The price, as suggested, was not a material consideration; that is, the comparative price, as it was made plain in the beginning that competition with other trucks was not entering into the consideration of the seller.

Again, this company placed a large truck with the Engineering Corps of the United States Army for use on coast fortifications in San Francisco. This order resulted from specifications which discarded price as a controlling feature, and called for a specially built article, which practically eliminated all other trucks.

A prominent branch manager, with headquarters in Washington, after stipulating that his name should not be used, agreed to be catechized at some length respecting his experiences in the commercial car business. He was led into this line of business at first, he said, by the conviction that "there was money in it." He early realized that if he was to succeed he must look well to the dollars and he made it a special point to "let no guilty man escape," as far as close collections could be said to achieve this end. Fortunately, and possibly due to



Foss-Hughes Company's New Salesroom, in Washington, D. C.

this vigilant chase of the elusive dollar, he was successful to the end that early financial difficulties were to a great extent overcome. As his connections had always been with manufacturers direct as a manager of factory branches, the question of contracts with manufacturers, so often a puzzle to dealers, did not have to be met by him.

When he came face to face with the question of competition according to this live wire, he found that the easiest and the most successful method was to seek to demonstrate as conclusively as possible the superiority of the truck which he was handling. In accomplishing the sale, where competition was at his heels, he sought to bring to bear every legitimate argument which up-to-date salesmanship would suggest, relying, of course, on the ability of his truck to uphold the statements made respecting it. This young man is strongly of the opinion that salesmanship ability is an asset which every dealer and salesman should not underestimate. Given a worthy truck, he thinks, if a sale is possible, salesmanship ability determines many a contest.

Economy Features

Discussing experiences in which suggestions might be made to the prospect touching the advantages which would accrue from the adoption of motor transportation, this manager asserted that it is always well to point out the advantages of a truck over a horse-drawn vehicle; that the economy feature cannot be overlooked nor too strongly demonstrated, and that one of the best selling cards is to play up the business prestige which the ownership of a commercial car will bring to the prospect.

His idea is that not only the increased prestige, but the possibilities for adding to one's business through the availability of motor transportation, cannot be too strongly suggested, provided it is done with discretion. He also inclines to the view that in some cases it is very necessary to talk the horse cost of delivery to prospects. Especially is this true, he believes, when a prospect shows an inclination to be doubtful of the economy in the use of a truck as compared with the upkeep of a horse-drawn vehicle.

Where this comparative cost of upkeep does not enter, then, says the manager, he believes in the efficacy of clean competition. And, he added with vigor, clean competition always wins, in that it pays in the long run, even though one may, as a result of adhering to this rule, sometimes lose a sale.

Five Reasons for Success

Asked to suggest five methods, principles or reasons on which he based his success as a commercial car dealer, the interviewed one replied:

First, offering an article which possessed real merit; second, adhering to the rule of honesty in representations made to customers, and paying particular attention to the manner of handling customers, observing their personality, etc.; third, untiring attention to the business; fourth, the coupling up of energy with lessons learned by experience; fifth, a personal knowledge of the automobile industry, with especial attention to the motor truck business.

An unusually emphatic "No" was the reply made to a question as to whether, in the opinion of this manager, a line selling at a low price, with low commissions, appealed to him more than a line selling at a high price, and with a better commission basis.

Like others talked to, this gentleman expressed the view that the prospects for the future of the commercial car industry in his territory are A No. 1. And he represents a big territory.



PAUL MOORE, Advertising Manager of the Service Motor Truck Company, Wabash, Indiana

He was connected with the advertising department of the National Cash Register Company for three years, and resigned that position to take up work in the sales and advertising department of the Shenango Pottery Company, New Castle, Pa., where he served for two years. He left that company to join the Weis Fibre Container Corporation, Monroe, Michigan, which position he gave up to connect himself with the Service Motor Truck Company.

Interviews With Chicago's Successful Dealers

Service Big Factor in Repeat Sales. Price Not the Main Consideration in Closing Sale

By WALTER A. BERMINGHAM

RECORD OF BUSINESS SUCCESS MORE IMPORTANT THAN PRICE IN SELLING TRUCKS

IT has been so long since Eugene Goldman engaged in the commercial car business—eleven years ago—that he has forgotten business efforts prior to that time. Beginning as manufacturer of Mogul motor trucks, to afterwards engage in the manufacture of the Randolph truck, at the beginning of this year, 1915, he left the producing end for the sales-end, opening salesrooms with the Master Motor Co. sign on the front at 2437 Michigan Boulevard; with the service station in the rear, opening on Wabash Avenue, through the block.

To say that, in the selling of Republic motor trucks, this agency has been successful, would be making a very mild statement, as its record for this year is the phenomenal sale of over four hundred Republic motor trucks in Chicago.

"With a unanimous sentiment among owners," said Mr. Goldman, "we have it that every one of our customers pulls for the Republic motor truck, realizing that they have the best truck at the best value."

There is a snap and push about this agency, indicating business is done to-day and not to-morrow. Service Superintendent Phillips, in speaking about service, said "Our attitude, or service, is to give it to all customers twenty-four hours of the day. We are minute-men, ready on call, although S. O. S. reaches us infrequently when the trucks are handled with due care. We have regular monthly inspections, costing our customers nothing. We want to, and do, keep our trucks in commission."

"As to price in consideration of a sale, it undoubtedly helps, but a past—a record of business success gained by delivering the goods—is more than the part that price plays."

"The horse is still in the running and is our competitor to a certain extent. We really have no motor truck competition, and yet, now and then, we have to get out and hustle."

"Most of our prospects are secured from customers, although in driving through Chicago's busy streets, now and then, I have seen several teams backed up to, or along side the curb, and stopping, I have entered the establishment where their service was employed, to talk motor truck," said Mr. Phillips. "Invariably, even if not in the market as motor truck buyers, the proper authority, or man, courteously receives me, at times giving me time to present my case, or suggesting a future call at a time when he will be at liberty to listen to me."

"There is a great interest in the motor truck, of course, among those who can profitably employ them in this admirably adapted city for their economical traffic advantages."

"As to the future—the outlook is extremely bright, we always have been motor truck optimists, and the promising future only makes us more thoroughly so."

BOOST YOUR OWN TRUCK—DON'T KNOCK

IN front of Ralph Temple's new location, at 2425 South Michigan Blvd., is displayed a sign "the Pioneer Motor Car Co." and thereby hangs this tale, characteristically told by Mr. Temple to the writer:

"The time saving features of the automobile influenced my decision to take over the Selden truck agency and to make it the exclusive commercial car in connection



RALPH TEMPLE
President of the Pioneer Motor Car Company

with my lines of gasoline and electric cars.

"I am handling Selden sales for the entire State of Illinois, helped by sales closed in the cities, and in small towns where railroads are not successful in giving adequate transfer, or transportation facilities."

"You ask me the most difficult sale? This is how to answer—'All sales have certain difficulties perhaps not possessed by other sales.'"

"You ask me to outline the sale which we took from the other fellow and how the feat was accomplished. Briefly: I spent the entire time allotted to me by the prospect in 'talking up my own truck.'"

"It has been my experience that every buyer, irrespective of the business he is engaged in, has his own ideas and hobbies of what he wants in the way of mechanical and body designs, and invariably they are wrong. My best success in making sales is to show results with staple designed cars."

"You ask the five methods, principles, or reasons on which one can base success on

the sale of the commercial car? My answer will be—The application of honest statements, irrespective of the fact that your car does not fill every specific requirement. My second answer to your question proposed would be, not to lead your customer to believe that the car you have sold him would carry any load that the driver feels disposed to dump upon it. Thirdly, a strict adherence to the principle that the car will not stand the abuse of rough and fast driving over unequal surfaces. Fourth, and, while the money lies in plain sight so that the customer can 'grab it' if he feels so disposed, I tell him plainly that he cannot come and get a lot of things from me for nothing, not to threaten me that if he don't get them, as he will ruin my business. I am going to sum up all five methods, principles, or reasons in just the one word—confidence."

"Confidence is not gained by the 'slick' ability to talk, but must be lived up to by strict adherence to business principles which cannot be made to suit any particular occasion. Confidence is for all occasions of equity and right."

"You wish to know what consideration and part price enters into a sale? In a nutshell, it is just everything."

"What appeals to me the most, low price and low commission, or a good fair price with a good living commission. The latter, of course, for, no difference how low the price may be, ninety-nine buyers will leave you no commission to speak of if they can help it."

"Horse versus motor delivery does not enter into consideration any more, and when the question arises of selling 'your' truck against competing trucks as it does, forget the other truck, if and when you can, and apply yourself to 'your own' knitting, but do not try to sell your truck if it specifically will not suit the requirement. There is something more than selling 'your' truck to a contemplating buyer. The basic foundation of the selling of motor trucks should be selling the right truck to the right man."

INTELLIGENT SALESMANSHIP vs. FUTURE BUSINESS

I WAS twelve years in the wagon business," said George Siegmund, "and, seeing it slip away from me as the motor truck advanced in favor, more particularly for heavy hauling, seven years ago I entered the sales end of the latter business."

Beginning with the passed away Rapid and Reliance trucks, where he remained until he sold that business to the then newly organized General Motors Co., Mr. Siegmund became general manager of their Chicago branch and filled that position for one year.

"My most difficult sale? I readily recall it. It was a Reliance, to Greeks in

the fruit and produce business. You see, it was like this—the young son, (age at least 40 years) wanted to buy a motor truck, even if his old father and mother unanimously opposed it. The sale was closed on a bitterly cold day, so cold that I was glad to transact the negotiations indoors close to a fire. The old father's anguish was so great that, when he found his opposition to the sale without avail, notwithstanding the cold, left the house in his socks, and unshod, walked up and down the ice-coated street, giving way to his pent-up passion. I got my money before I left.

"Satisfied customers I made in the wagon business, many of whom are now motor truck owners are my mainstay in winning out against my competitors.

"It is impossible to be successful in the motor truck business without adequate service. My idea is that the customer purchases both truck and service and that no contract is filled without the latter as a requirement.

"With me the part that price pays in consideration of a line is—"The best I can get." The line selling for the high price and good commission appeals to me before all others," said Mr. Siegmund. "The horse has ceased to be a factor, as my competitors are other motor trucks.

"Selling Mogul motor trucks would be impossible, to my mind, if either myself or my salesman did not thoroughly understand the prospect's need before approaching him to interest him for a purchase, as the end in view. It isn't altogether having faith in your product. The latter is a great aid to the conscientious salesman, and yet, knowledge, motor truck sense not 'hoss' sense, must be a large part of your mental equipment. The heavy-duty motor truck, apparently cost a lot of money, hence, the axiom, that, 'It takes money to make money,' reasonably applied to a motor truck sale, as unloading the truck on the buyer and getting the money, is the least part of it; or, in plain language, a

customer is the desired end in motor truckdom and his future profit from his investment, if mutually advantageous, must result from intelligent salesmanship in more business for me."

SPECIAL ANALYSIS OF PROSPECT'S BUSINESS NECESSARY

WE saw the commercial motor vehicle's future so closely identified with the pleasure car end, that the major part of our organization could be used, when we added to our line of Pierce-Arrow motor cars for the sale of motor trucks from that same plant," said Henry Paulman, of H. Paulman and Co., the Michigan Boulevard, Chicago distributors of Pierce-Arrow trucks.

"In assuming the agency for the sale of these trucks with no financial worries to handicap their selling efforts and the prestige of a successful past," said Mr. Paulman, "the initial educational work was so expensive that we had to closely watch the account to avoid too much loss during the pioneer period. We had to take a loss,

that we knew, but exercised care in the conduction of a new business, as motor truck sales, by guarding the outlay to even minor details.

"We fill an order from anywhere, having factory arrangements and facilities that are, and always have been, satisfactory,

"The first motor truck we sold was to one of Chicago's great packers, consummating the deal on the reputation of our house combined with the excellence of the product. 'Our hardest sale?' Hard to say which, as they all have difficulties of some nature.

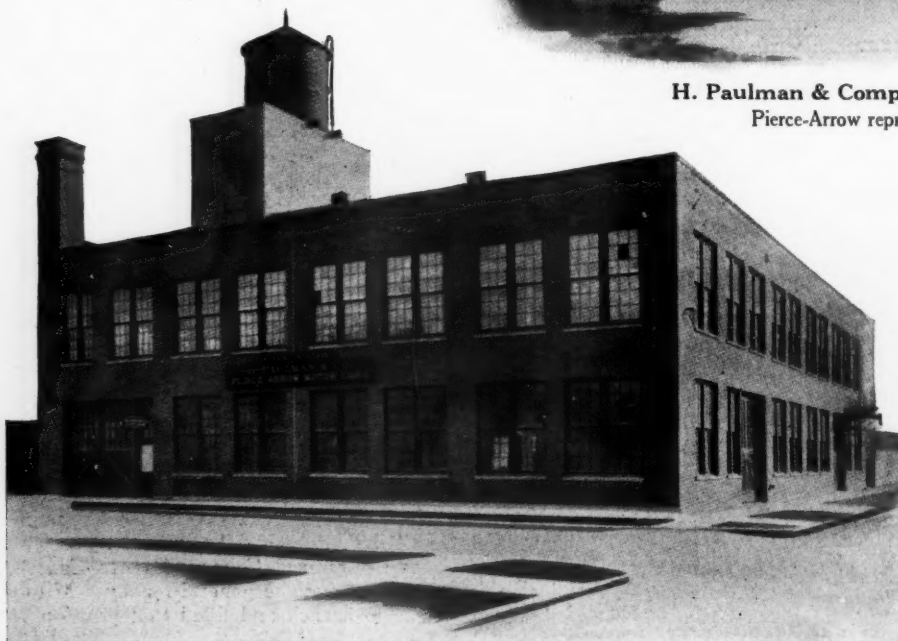
"We believe in a special analysis of a prospect's business and in making recommendations as to the equipment surrounding and the method to be used to give the motor truck its greatest earning capacity.

"Service must be liberally given, owing to the lack of operating experience and care of motor equipment by drivers and their employers.

Our business success as commercial car dealers cannot be measured by financial



H. Paulman & Company's Salesroom at Night
Pierce-Arrow representatives in Chicago



Service Station of H. Paulman & Company
Chicago dealers for Pierce-Arrow trucks

returns, inasmuch as, we have made no money we feel we have been only partially successful.

"They believe the part price plays in the consideration of a line very important, owing to the extraordinary service motor trucks are subjected to.

"Recognized quality first—I believe in," said Mr. Paulman, "list price is secondary, then, commissions liberal enough to insure service, and co-operation by dealers in splitting commissions on sales in other dealers' territory, thereby assuring factory and retail sales organization, volume.

"No! it is unnecessary to talk horse cost of delivery, inasmuch, as comparisons of that nature, in most instances, favor motor trucks, and yet, there are and probably will be instances where it may be used to telling advantage for sales.

"The future of the motor truck looks Good, Very Good."

The CCJ has most advertisers because it gives them biggest returns

BELIEVES IN KEEPING CUSTOMERS' TRUCKS IN CONSTANT COMMISSION

ATTERBURY motor trucks are represented in Chicago by the Dealers' Auto & Supply Co., 1508 Michigan Boulevard. This agency began operations in April of this year, and is a partnership between L. B. Garrison and W. B. Ingwersen, neither of these men have anything to tell of past financial difficulties, but claim satisfaction with a past recording them as successful business men enough to cope with the prospects for their fair share of the motor truck trade in their assigned territory, the whole of Cook and Lake Counties in Illinois.

Dealing, as they are, with a discriminating purchasing public, meeting with worthy competitors, both declare every sale a hard one, although Mr. Ingwersen believes the closing with a prospect, who claimed that the Atterbury and a competitor's offering were identical, was his hardest sale. He offered his model as a gift, should investigation prove it a duplicate of his business rival's offering, winning by a fair margin and thereby adding another sale. Keeping their customers' trucks in commission from start to finish, or, to be more explicit, from "Sale to Scrap Time" is their method of conducting business.

As to the part price plays in sales—they believe it the greatest. Quality, of course, going with it. "The horse as a competitor is done for, as motor truck owners, or those 'in the know' are both our prospects and purchasers. Instances have practically disappeared where the horse is in any way a factor to further or increase the sale of the motor truck models we handle in our territory.

Both members of the Dealers' Auto & Supply Co. in advocating the merits of Atterbury motor trucks, for the purpose for which they are designed and constructed, feel and say, that their territory is far and away the premier for their business, that Chicago's commercial car skin has hardly been pricked as yet, and that the real salesman with the real goods enjoys unlimited opportunities for success in the era of prosperity the entire nation is now enjoying. Getting one motor truck into a locality makes the industry move, as it is a demonstration unsolicited, and yet, in evidence to all willing to profit and take advantage of its merits. "The business front, of city or town blocks, opens a

locality field started by motor truck pioneers, which develops the vast aggregate business necessary for our commercial salvation."

TIME PAYMENTS MIGHT BRING FINANCIAL DIFFICULTIES

BECAUSE I thought it was the coming business," is the reason C. A. Lundberg, manager of the Menominee Motor Sales Co., Ogden and Western Avenues gives for becoming connected with the business for the sale of Menominee and Standard motor trucks.

Mr. Lundberg is the only Chicago motor truck dealer whose memory serves him well enough to answer as to whether he had early financial difficulties, if any, and how they were overcome. He said, "None,

resulted, due to a special analysis of a prospect's business, and which enabled him to use the commercial cars to advantage was a certain baker, who operated three horse wagons, with expenses for feed and incidentals amounting to \$100 per month outside of his help and repairs to his wagons. We sold him a 1-ton Menominee motor truck which displaced, or rather made it possible to sell two wagons and dispense with the services of one man. This happened six months ago and since that time he has increased his business fully \$500 per month and reduced his delivery expenses \$100 per month. We were willing to sell this baker a motor truck and convince him that it would pay for itself. We sold it to him on time payments, a small payment down and the contract called for \$100 per month until the truck was fully paid for. The saving he has made on his monthly expenses has always been ample enough to cover the motor truck payments.

"Our attitude on service is the knowledge that a service station is a necessary expense, as it is maintained for the convenience and benefit of our customers.

"At the present time Chicago motor truck dealers are not being remunerated to the extent of the value of service rendered. Eventually dealers must find some manner of obtaining payment for this service.

"As to whether a line selling at a low price, with low commissions appeals to me greater than the line selling at high prices and better commissions, and vice-versa, there are two sides to this question: first, it would appeal to me if a low priced car was popular, to represent it on this market if I were starting over again. Secondly, starting out with a new product I would prefer a high class, high commission motor truck.

"Talking about the horse cost of delivery? 'No,' it is a question of competition against other motor trucks now."

RIGHT TRUCK IN THE RIGHT PLACE WITHOUT REGARD TO PROFIT

By W. D. MENG

Mr. Estel Scott, who is manager of the General Motor Truck Co. in Kansas City, got into the motor truck business something over eight years ago. He took up the truck business because he conceived that it presented at least as large, and perhaps in the end a larger, opportunity than



C. A. LUNDBERG
Manager Menominee Motor Sales Company

but we are liable to have them if we continue to sell commercial cars for time payments.

"Our territory is more than we can handle, as, in Chicago alone, there is unlimited opportunity. We cover northern Illinois and the Chicago corner of Indiana. Our own experience warrants us in saying that our factory contracts are favorable.

"As to difficult sales, there are lots of them, and yet we have managed to close different sales aided by the misrepresentation of competitors.

"The details of a case in which the sale



Service Station of the Menominee Motor Sales Company, Ogden and Western Avenues, Chicago

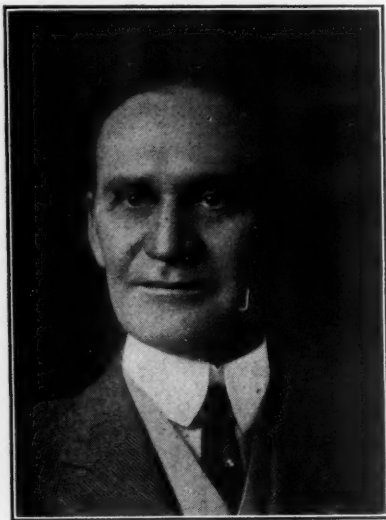
The CCJ leads in circulation, advertising and prestige

the pleasure car business. If the field was not quite so large, there was less competition and the problem of good and bad seasons did not enter into it so largely as in the case of the pleasure car business. His subsequent experience has verified his early conceptions on this subject.

He avoided many of the difficulties that truck agency beginners have, by proceeding on a conservative basis. He realized in advance of his own experience that the truck business differs from other motor car business in that it cannot be forced. He fortified himself with a complete knowledge of prices on trucks that were in the market and did not permit shrewd buyers to talk him into the proposition that he should sell the latter a truck less the discount in order to have one of his trucks on the street.

Mr. Scott's agency does business throughout what is known as the Kansas City territory, which from its character promises a large and continuous development in the motor truck business. It is one of his theories that his success is increased by the fact that he represents a concern that does not mix the truck business with something else, that specializes in trucks alone.

Mr. Scott believes that it is a good salesmanship policy to fully analyze the situation of his prospective customer, especially with a view to knowing just what his truck needs are. The right truck in the right place is his policy without regard to the particular amount of the profit. It is a good thing in this connection to have concern for repeat orders. On the part of many salesmen there has not been enough conscientious attention to placing the right truck in the right place. There have been



ESTEL SCOTT

¾-ton trucks sold where the need was for ton or 1½-ton trucks and the reverse is very often true. It is Mr. Scott's observation that too much service is sold and not enough truck—that the promises of use are often unwarrantably and unnecessarily strong. His plan is to sell trucks with no more promise as to service than he would use in selling any other staple line of goods.

Mr. Scott has based his success on, first, the selection of a company financially strong enough to take care of its product; second, on the fact that he indulges in no rash promises in making sales and has

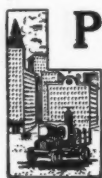
taken conscientious care of the interests of prospects; third, that he has sold his trucks at the list price and has used part of his profits in a wise policy of adjustment, and, fourth, that he has always carried a sufficient stock of repair parts to take care of the service.

The real basis of truck sales is comparison with competing machines as to points of qualification and efficiency. The horse cost of delivery is not a controlling consideration with an enterprising business man.

The indications for the development of the motor truck business in the Southwest, in the mind of Mr. Scott, are getting better all the time. The outlook is now very good indeed and sales increase largely with every year.

BUFFALO'S GLOBE TROTTER TRUCK DEALER

By GEORGE W. GRUPP



POSSIBLY the greatest globe trotter in Buffalo and the greatest amongst the Buffalo commercial car dealers is Arthur J. Sanderson, the successful agent for the Service. He has circumnavigated the earth seven times, tramped with Jack London in the Klondike and China, and was sheriff of Nome, Alaska, during the old "sour dough" days, etc.

Mr. Sanderson had been in the automobile business ten years when the Federal people asked him, in 1910, to take the Federal agency. For two years he held this agency and then took the Bessemer agency. This agency he kept until 1913, when he took the agency for the Service with a territory stretching from Albany, N. Y., to Erie, Pa.

"I sold my first truck to H. A. Meldrum & Co., one of Buffalo's largest retail department stores, in 1910. They had a Dennison, which was equipped with pneumatic tires. These tires gave them considerable trouble, so I took their old Dennison as part payment when I sold them a Federal with solid tires."

A Hard Case to Close

"Three years ago I called on the largest and oldest moving and carting concern in Rochester, N. Y., with the idea of selling a truck, but it was impossible, the owner absolutely refusing to listen to me. For a whole year I worked on him. Finally he said to me one day: 'Mr. Sanderson, I don't want a truck. I have enough money to last me the remainder of my days, and besides I don't care if my competitors are getting some of my business because they own trucks.' 'That may be true' I said, 'that you do not care but do you realize that your two sons are depending on this business for a livelihood—the salary you are paying them? Surely, you are not willing to ruin a business which your sons expect to continue after you are dead?' This made a deep impression, and he told me to come back the next morning.

"The following day he told me that he had talked it over with his sons and they had decided to buy the truck themselves. That he was to advance the money and that they would give him notes for the moneys advanced. And to the old gentleman's surprise, the boys paid all the notes within a year."

Makes a Specialty of Farmers

As Mr. Sanderson makes a specialty of farmers, he tells of this experience: "I once tried to sell a 1½-ton truck to a farmer, but he refused by saying that he never carried more than a ton and did not see the necessity of buying a 1½-ton truck. I took his word for it, and instead of forcing a sale, I began to look over the situation. After making a careful study of this case I returned to the farmer with



ARTHUR J. SANDERSON

Who has had great success with the Service truck

this suggestion: 'Why don't you haul your neighbors' products to the market? By so doing you will be able to carry your own products free of transportation cost and make enough to pay for all your running expenses and time.' The plan appealed to the farmer, so he called on his farmer neighbors to see if he could do their hauling. They agreed, so he bought a truck."

His Five Principles

Being a specialist on farmers, he sums up his principles of success in the following manner:—

(1) "I appoint sub-agents who are farmers themselves and who know every farmer in that section.

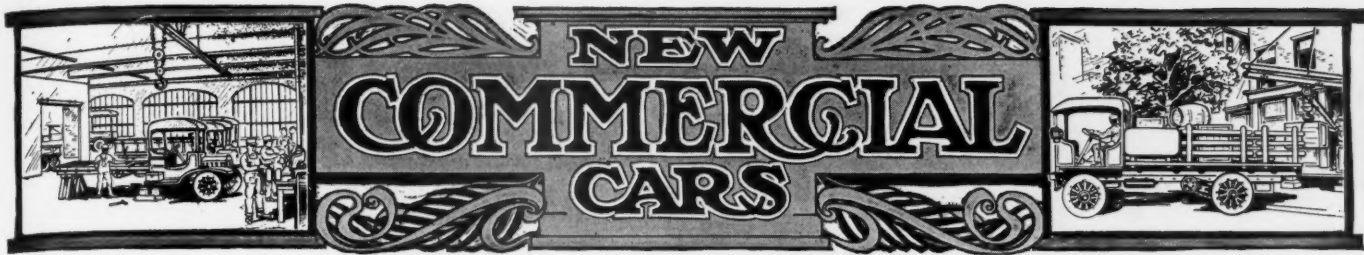
(2) "I appoint sub-agents who do not have nice warm show rooms, where the farmers might congregate, but those who have to sit back of the steering wheel in order to keep warm. This means that the demonstrator is always on the road and doing work for somebody, and not standing behind a plate glass window.

(3) "I show my trucks at every county fair in my territory, through my sub-agent in that district. I find that you can become acquainted with country prospects through your dealer at such fairs. But it is dangerous business to get the confidence of a country prospect. He immediately thinks you are a hold-up man if you do. I let my agent, who was born and raised in that section, and who takes in all the church socials, etc., do the business and close the sale. I do the engineering.

(4) "I teach my prospect that life is transportation and that the truck is an improved means of transportation, also that the driving of a truck is a pleasure.

(5) "I never talk cost to a prospect, but instead refer him to an old customer."

(Dealers' experiences continued on page 37)



The New Rush One Thousand Pound Delivery Vehicle, Chassis Price \$625

The Latest Entrant Into the Light Delivery Class



BIG interests are at last taking notice of the demand for light-weight, efficient, motor-driven delivery units, which are suitable for not only large fleet users, but for the small merchant with his one-horse unit.

The problem of developing a motor-driven truck or delivery vehicle capable of displacing economically the one-horse wagon has been attacked, and is gradually being solved by automobile engineers. The Rush delivery car, which is now being manufactured and marketed by the Rush Delivery Car Co., 1007 North Front Street, Philadelphia, Pa., is the result of painstaking work on this problem and from the president, A. M. Pearson, down through the organization, the personnel of the company is represented by men who have had long years of experience in the automobile business.

Large corporate interests of Philadelphia and vicinity are backing the new company with ample funds and it goes without saying that such a combination is sure to become a factor in the light delivery field.

The Car

The vehicle itself, as shown by the illustrations, is staunch and businesslike in appearance, with distinctive lines. In the search for suitable parts for a vehicle of this capacity it was found that practically nothing but pleasure car units were available for the rear axle construction, and as the makers are strenuously opposed to anything that approaches the converted pleasure car, it was decided best to embody in the construction an entirely new truck axle. A satisfactory axle was finally developed in a Philadelphia plant, and with a view to making this part the axle interests' equipment, material and parts were purchased outright, and the Rush Delivery Car Co. will now manufacture the axles for the Rush delivery car. Constructional features of this new axle are given in detail in this article.

A four-story factory building has been secured at 1007 North Front Street, Phila-

delphia, and here the first cars are coming through for January delivery. Quantity production, using standard units, will be the order of the day, as it must be to turn out a car of this size and capacity at \$625 for the chassis.

Specifications in Brief

Briefly, the specifications of the car are as follows: Lycoming four-cylinder block engine, Model L, $3\frac{1}{4}$ bore by 5 in. stroke,

which allows perfect core setting and even thickness of walls, insuring efficient cooling. The head is held in place by heat-treated angle iron steel bolts, is easily removable, giving access to the cylinder and valves. This head is also reinforced with rods, preventing warping during machining, and making a lasting fit between the head and the cylinders. A copper asbestos gasket makes a perfect joint.

Cooling is by thermo-syphon system, water jackets and spaces being large, especially around the combustion chamber and the valves. The water inlet is located in the center of the cylinder casting beside the valves at the bottom of the jacket, permitting complete drainage of the jackets through the radiator. Leaks and imperfections in the cylinder casting are guarded against by subjecting the castings to a cold-water test under heavy pressure. After seasoning they are ground to size.

The pistons are of the same close-grained iron as the cylinders, turned to insure even thickness of wall, annealed and then ground to size. There are three eccentric piston rings ground on three sides. Each set of pistons and rods is carefully balanced to eliminate vibration. The connecting rods are the usual I-section drop forgings of 40 carbon steel, double heat-treated, carried at the upper end by a hardened and ground hollow piston pin. The pin is held in the piston by means of a set screw, in turn locked by a cotter pin. The upper end of the rod bears in a bronze bushing, while the lower end is a split bushing $1\frac{1}{4}$ in. in diameter by $2\frac{1}{8}$ in. long. The intake manifold is cast integral with the cylinder, there being but a short cast iron connection between it and the carburetor. The exhaust manifold is a special construction provided with a partition pre-



The Rush Light Delivery Truck, Built by Rush Delivery Car Company, Philadelphia

This latest entrant into the light delivery field is noteworthy in regard to its constructional features in that strictly truck units are employed. Converted pleasure car units are absolutely barred. The price of the chassis is \$625.

developing 28 h.p. at 1600 r.p.m.; thermo-syphon cooled; honeycomb radiator with cast oven shell; Carter carburetor; high-tension magneto for ignition; three-speed selective sliding gear transmission, forming a unit with the power plant; cone clutch; bevel gear, full floating rear axle; change speed and brake levers at the center; wheelbase, 104 in.; weight of chassis, 1600 lbs.; price, \$625, fitted with pneumatic tires on all four wheels.

The Power Plant

The engine is the new Model L Lycoming product, with cylinders cast in block, integral water jackets, valves $1\frac{3}{8}$ in. in diameter, located on the right side of the engine with gray iron heads fused their entire length of contact to steel stems. The cylinders and the head are cast separately,

insure even thickness of wall, annealed and then ground to size. There are three eccentric piston rings ground on three sides. Each set of pistons and rods is carefully balanced to eliminate vibration. The connecting rods are the usual I-section drop forgings of 40 carbon steel, double heat-treated, carried at the upper end by a hardened and ground hollow piston pin. The pin is held in the piston by means of a set screw, in turn locked by a cotter pin. The upper end of the rod bears in a bronze bushing, while the lower end is a split bushing $1\frac{1}{4}$ in. in diameter by $2\frac{1}{8}$ in. long. The intake manifold is cast integral with the cylinder, there being but a short cast iron connection between it and the carburetor. The exhaust manifold is a special construction provided with a partition pre-

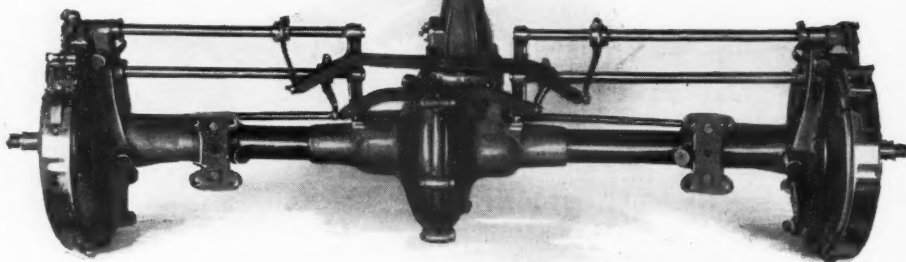
venting back pressure from one cylinder to another. The crankshaft is of two-bearing type 40-50 carbon steel, the front bearing $1\frac{3}{4}$ diameter by $3\frac{3}{4}$ long, rear $1\frac{3}{4} \times 3\frac{15}{16}$ in. long. An integral flywheel flange provides flywheel attachment, and the whole is given a running balance.

The cam shaft with its integral cams is 1 in. in diameter front bearing, $1\frac{1}{4} \times 2\frac{15}{16}$ in. long, center $1\frac{55}{64}$ in. diameter by $\frac{3}{4}$ in. long, and 1 in. diameter by $2\frac{9}{16}$ in. long. The shafts are sclerescope tested for hardness. Helical timing gears insure smooth and quiet driving of the cam shaft, the crankshaft gear being of steel and the cam shaft gears of cast iron. The crankshaft runs in die cast white metal split bearings, adjustment being made by re-

movable brass shims. Lubrication is by splash. All gears are marked for preservation of timing when reassembling parts.

Rush Rear Axle of Special Design

It is of semi-floating type, using Brown Lipe differential. The axle is fitted with Hyatt bearings and ball thrusts.



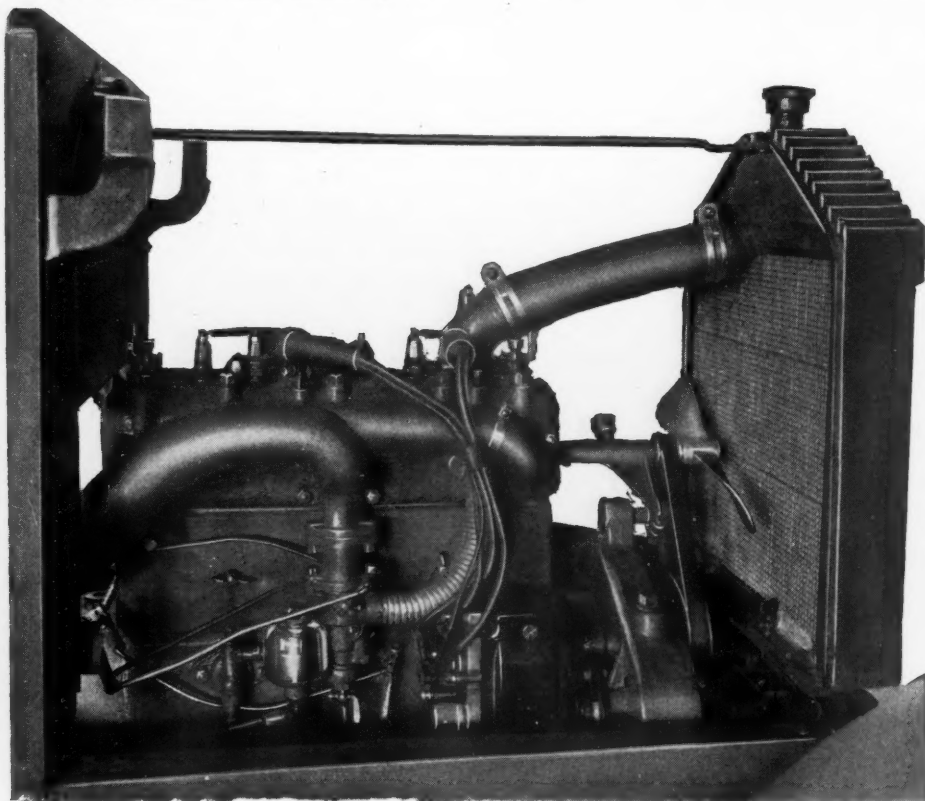
The crankcase is of reinforced aluminum, the crankshaft bearings supported by heavy webs with removable caps. The upper half carries one-half of the bell housing; the lower half is an oil pan having a capacity of 5 qts. Connecting rods and pistons can be removed without disturbing the adjustments of the main bearings.

The entire power plant is three-point suspended, being pivotally mounted on the cross frame member at the front and supported at two points directly on the side frame sills by a cast steel cross frame member at its rear.

The sliding gears are of the usual type and construction, and mounted in the case, which forms a part of the unit power plant. The gear shift lever and brake levers are directly mounted on the cover, bringing them in the proper position for center control. The gears give three speeds forward and one reverse, with the usual direct drive on the third speed, with a gear reduction of $4\frac{7}{8}$ to 1.

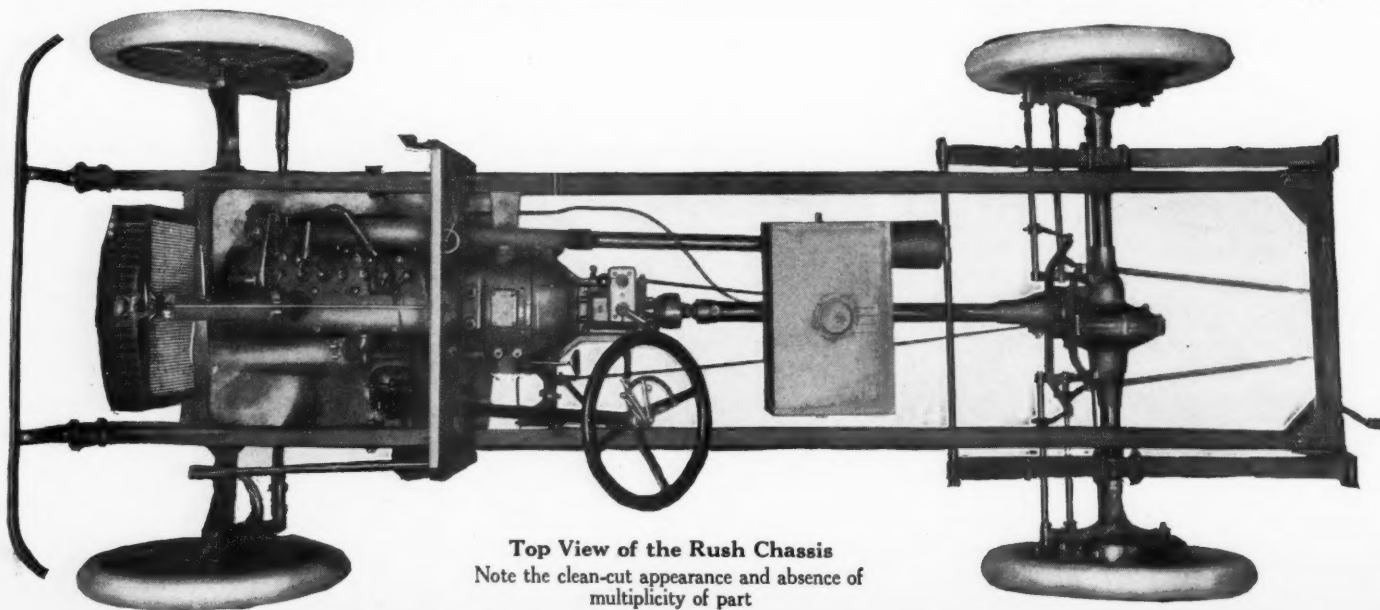
Special Rear-Axle Design

As none of the axles on the market appealed to the Rush designers as particularly adaptable to a strictly commercial car of 1000 lbs. capacity, the axle herewith illustrated and described was designed and developed by engineers now connected with the Rush Co. The entire construction is unusually staunch, as is necessary for commercial purposes. It is semi-floating, using



Right-Side View of the Rush Power Plant

The entire power plant is three-point suspended. Splash lubrication and thermo-syphon cooling are two features which make for less complication



Top View of the Rush Chassis

Note the clean-cut appearance and absence of multiplicity of part

The CCJ has most advertisers because it gives them biggest returns

a Brown-Lipe differential of bevel gear type, with a 12-tooth bevel pinion, meshing with a 53-tooth bevel ring of 5 pitch. The central part of the housing consists of the usual casting, which in this case is of malleable iron, into which are forced and pinned tubes, which act as the shaft housing, and carry spring pads, etc., at the outer ends. These spring pads are allowed a slight motion around the axle, the same being limited by a pin brazed into the bottom of the axle housing tube. The axle is fitted with large Hyatt bearings and ball thrusts. Back of the bevel pinion is a New Departure bearing of double annular type,

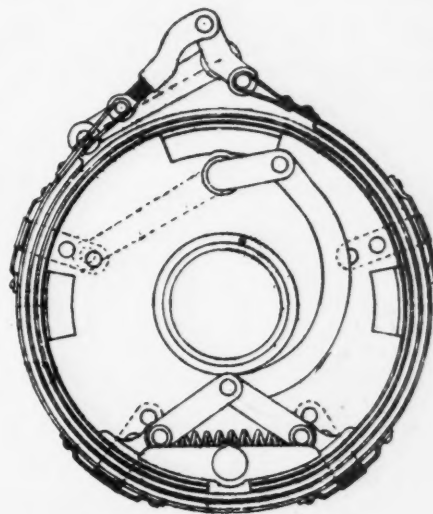
taking both side and end thrust, thus making in the axle assembly five Hyatt bearings, three cup and cone thrusts, and one New Departure double bearing. At the forward end of the propeller shaft is another Hyatt bearing, which carries the shaft and the housing. There is also a suitable ball thrust at this point. A $\frac{1}{2}$ in. truss rod is supplied under the axle. The live shaft is $1\frac{3}{8}$ in. diameter of Majori steel.

The entire assembly is liberally supplied with grease cups at desirable points and on either side of the differential there are triple packings preventing grease leakage.

Large Brakes

At the end of the axle are 14-in. pressed steel brake drums bolted through the wheel flanges. The emergency brake is the external one, having a face of $1\frac{3}{4}$ in. and a diameter of 14 in., Multibestos faced. The service brake is an internal expanding one, with the same facing. Both brakes are

operated by double acting toggles, and steel pull rods which connect with single-tree-type equalizers directly at the center, straddling the differential housing. Both rods connect with levers on the $\frac{3}{4}$ -in. brake shafts mounted on the front of the axle housing and parallel to it.



The Rush Delivery Car Brake

This is 14 in. in diameter. Rattling is prevented by three special springs

There will be no rattling of brake bands on the Rush car, as each band is held completely out of contact with the drum when not engaged, by three special springs.

The track of the axle is 56 in.

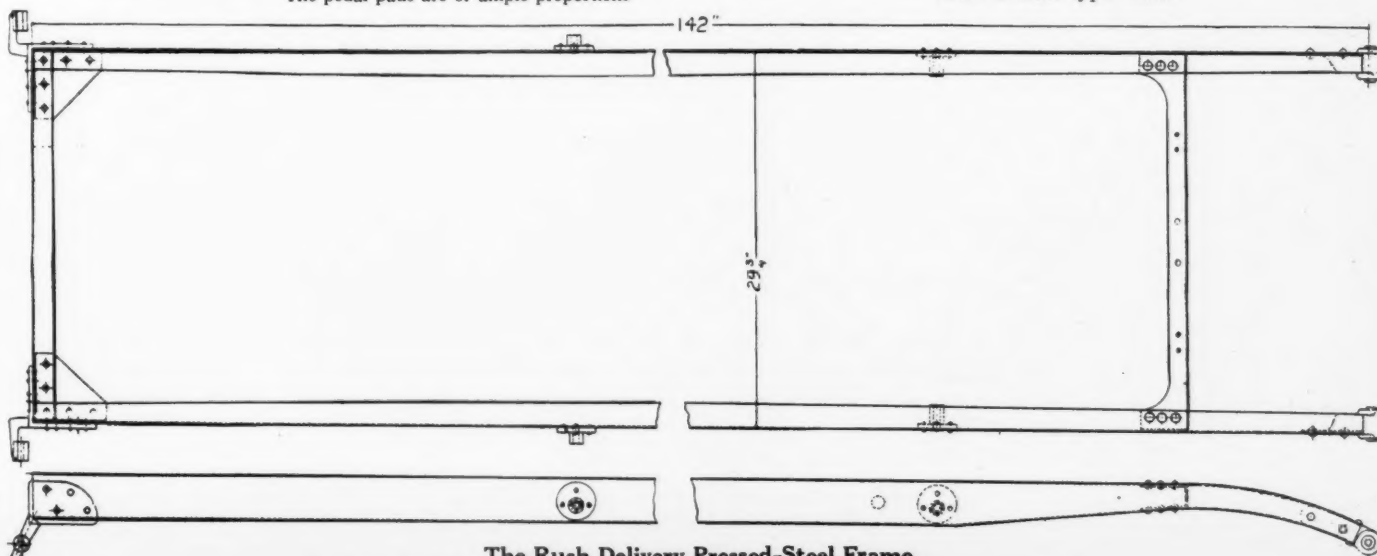
Substantial Pressed-Steel Frame

The frame which is of 5-32 in. steel, is of channel section, with straight side members $3\frac{1}{2}$ in. deep, with 2-in. top and bottom flanges horned at the front, and square at the rear. Front and rear cross members are well gusseted, the rear engine support which is a steel casting, forms a substantial cross frame member, while a steel rod which forms a support for the forward spring shackles of the rear springs, forms another frame stiffener, making virtually four cross frame members.

The front axle is a drop forging of the usual I-section of Sheldon construction, with Elliott type ends.

Control Elements of the Rush Light Delivery

Steering is by 16 in. wheel at the aft, with gear shift lever and brake lever in the center. The pedal pads are of ample proportions



The Rush Delivery Pressed-Steel Frame

The frame is of 5-32 in. channel section. Front and rear cross members are well gusseted

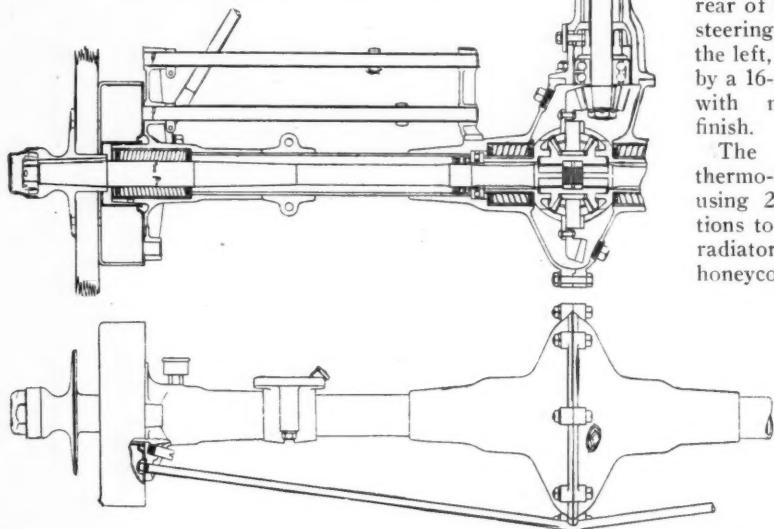
The CCJ leads in circulation, advertising and prestige

Springs

The spring suspension consists of four semi-elliptics front, 34 in. long, by 2 in. wide, six leaves shackled at the rear end and attached directly to the frame horns at the forward end. The rear are 44 in. long, 2 in. wide, six leaves shackled at the rear and supported at the forward end by cast steel hangers attached to the cross bar, acting as a frame member, as before mentioned. All springs are mounted on top of the axles and spaced 34 in. center to center.

Wheels and Tires

The wheels are of the usual artillery type, twelve spokes of $1\frac{3}{8}$ in. diameter, and are fitted with Jackson 10 L demountable rims, and have malleable cast hubs.



Three Views of the Specially Built Rush Rear Axle

The bearing equipment is well shown. The entire assembly is well supplied with grease cups

A distinctive mark is the brass hub cap with "Rush" in the end in black and white enamel, so that it always remains clean and legible.

Thirty by $3\frac{1}{2}$ -in. oversize tires with sculptured treads are supplied on the rear, and the same size on the front.

The steering gear is of Foster make, and consists of an irreversible worm and sector with the usual spring end ball and socket connections, with the cross connecting link at the rear of the axle. The steering column is at the left, is surmounted by a 16-in. hand wheel with natural wood finish.

The engine is thermo-syphon cooled, using $2\frac{1}{2}$ -in. connections to and from the radiator, which is of honeycomb type and

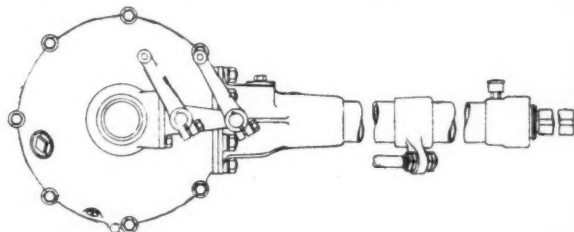
very distinctive in appearance, as it is set in a cast fin housing, as shown in the accompanying illustration. Another distinguishing touch is the filler cap which is of bright red. The fan is of two-blade cast aluminum aeroplane type, adjustably mounted on the forward end of the engine.

Mixture is supplied the engine through a Carter carburetor with flexible hot air pipe and exhaust stove with controls for same on the dash.

Ignition

High-tension ignition is supplied by a Splitdorf Dixie 40 magneto, shaft driven from the half-time gears, with a flexible leather washer connection in the shaft, preventing any binds.

The lines of the car, as will be seen from the accompanying illustrations are unusually good, the hood being long with a slight slope. The body is entered by a step in the form of a short running board. Protection for the driver is provided by adjustable windshield. Bodies can be had to suit various requirements and the car is listed at the unusual chassis price of \$625 f.o.b. Philadelphia. With express body, the price is \$700 and with steel panel body, with windshield, \$730.



Koehler Trucks for the 1916 Season Confined to a One-Ton Chassis



SPECIALIZING on a full one-ton capacity truck with four-cylinder valve-in-head engine and shaft drive, the H. J. Koehler S. G. Co., of 291-93 Halsey Street, Newark, N. J., is entering its 16th year in the motor vehicle business on a minimum

2000 output for the 1916 production season.

This model "K" will have internal gear drive, 129-in. wheelbase, extra large open flare-board type body, being 8 ft. 6 in. long back of the driver's seat. It will be noticed that the floor of the body is very low, facilitating loading and unloading, and minimizing strains and skidding. The body and hood are finished in durable chrome green, gear being amber brown.

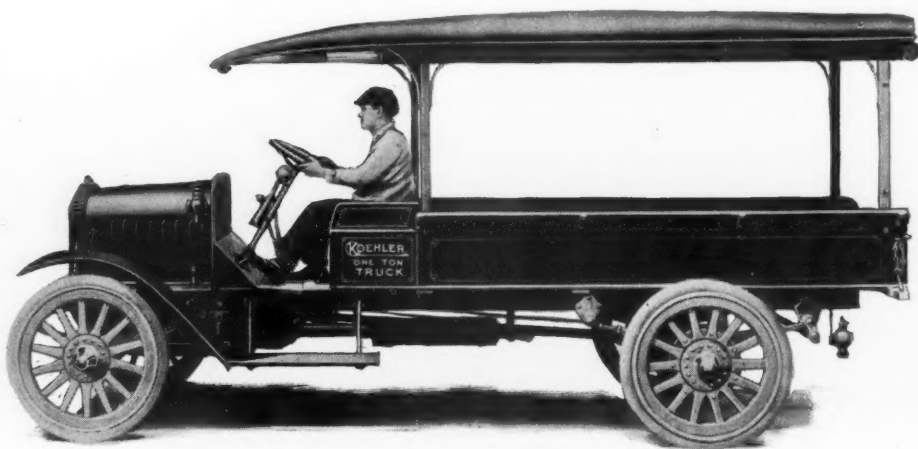
Unit Power Plant

The engine is of the valve-in-head type, bore, $3\frac{1}{2}$ in.; stroke, 5 in.; developing in excess of 30 h.p. Cylinders are cast in block, the upper portion of crankcase being integral with them. The jacketed cylinder-head contains the entire valve movement for the four cylinders, and is readily removable. Valves are large and interchangeable. Connecting rods are drop-

forged "I"-beam section. Crankshaft has three bearings. Bearings are bronze shell-type faced with nickel-babbitt. Lubrication is by force feed. Ignition by high tension magneto, carburetor being float feed type.

Clutch and Transmission

A cone type clutch is housed with the flywheel and gear set. Transmission is of selective type, giving three speeds forward



The Latest Koehler Truck, Model K

This is the 1916 Model K Koehler one-ton truck, which sells for \$895 complete with body, minus top

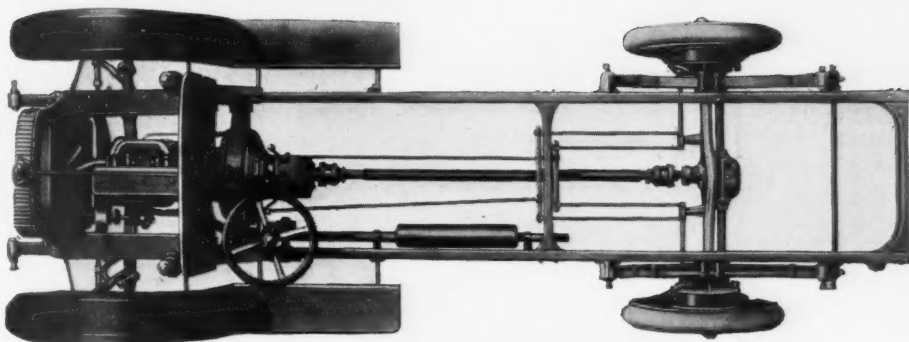
The CCJ brings greatest returns to advertisers because of largest circulation among quantity buyers

ings. Drive from transmission back to axle is by shaft. The rear axle is the internal gear type, the "dead" member being a solid one-piece drop forging.

The radiator is "built-up" type, separate top and bottom tanks and side members bolted together around a vertical tube core or cooling section. An 18-in. belt-driven fan assists cooling.

The chassis has channel-section frame, with cross supports at four points. Springs are built up of four different thicknesses of leaves. Ends are bushed, and clips are large and of carbon steel.

Wheels are 34 in. with fourteen square spokes in each. Steering wheel is on left side.



Top View of Chassis of Koehler Model K

This chassis has unit power plant with three-point suspension, long-stroke four-cylinder engine, and internal-gear drive type rear axle

New Acme Two-Ton Model Composed of Standard Units. Price, \$2,000 Equipped



ANNOUNCEMENT is made by the Cadillac Auto Truck Co., of Cadillac, Mich., of a new Acme 2-ton truck, price to be \$2000 equipped. It will be composed of popular units, accessibility, simplicity and economy being taken into consideration in selecting the units. This 2-ton model will soon be followed by another model, the second step in a complete line.

The wheelbase is 148 in., tread front and rear 58½ in., loading space 128 in., tires 36x4 in. on front and 36x6 in. on rear. Dual tires furnished when desired.

Unit Power Plant

The unit power plant has three-point suspension. The engine used is a Continental type C, which develops 40 h.p. on brake test. The bore is 4¾ in., stroke 5¼ in. The clutch is a Warner dryplate multiple disc clutch, the selective type transmission being of the same make and giving three forward speeds and one reverse speed. Gears are heat-treated alloy steel with 1 in. face.

Drive

The drive shaft is in two pieces, employing three universal joints. It is supported in the center by self-aligning ball bearings. The axle is not provided with radius or torque members, the top leaves of the

springs being special alloy steel to take both torque and thrust.

Rear Axle

The rear axle is the full-floating Timken-David-Brown worm drive type. The frame is a Smith pressed steel heat-treated, and springs are Detroit, self-lubricating and bronze bushed. Both sets of brakes are internal expanding.

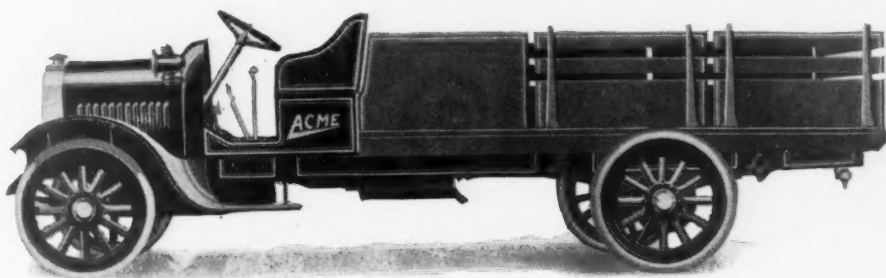
Governor

The engine is equipped with a Pierce governor which is locked and sealed, and limits the engine speed to 1200 r.p.m., which allows a truck speed of 17 m.p.h.

The front axle is a Timken, equipped with roller bearings. The radiator is a Long truck type radiator. Ignition is by Eisemann magneto and carburetor is a Rayfield. A Gemmer steering gear is used with left side control. Wheels are artillery type.

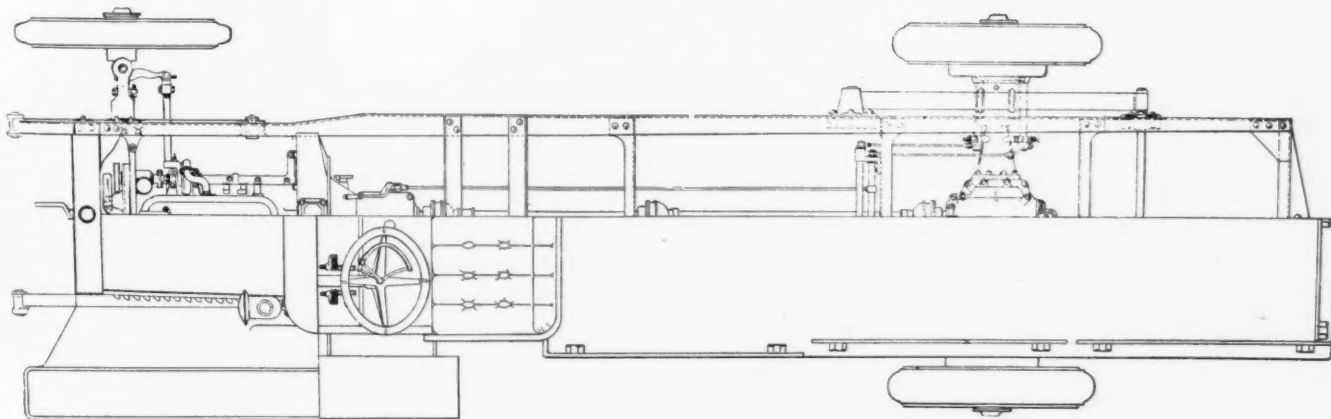
BUYERS' INFORMATION ISSUES

The January and February issues of THE COMMERCIAL CAR JOURNAL will contain complete specifications and illustrations of all trucks made in America. January will be the Eastern Section, February the Western Section.



Side View of Chassis of Acme Two-Ton Truck

This chassis has a 40 h.p. Continental engine, Warner clutch and transmission, Timken-David-Brown worm-drive rear axle, Rayfield carburetor, Eisemann magneto. Unit power plant has three-point suspension. Price \$2,000 equipped.



Top Plan View of Acme Two-Ton Truck

This illustration shows half the floor space, steering wheel and pedals, the balance showing chassis and mechanical details

The CCJ has most readers because it gives most information

The New Models 3 and 4 Replace the Former Series No. 2 Stewart Three-Quarter Ton Truck

The Stewart Motor Corp., of Buffalo, N. Y., will replace Series No. 2 of their ¾-ton capacity trucks with Models 3 and 4 of ¾ and 1¼-ton capacity respectively. Respective prices are \$1290 and \$1390 for the chassis f.o.b. Buffalo.

The Model 3 is of the same capacity as the former model, but has many minor improvements. The Model 4 will be equipped with solid rubber tires, the first Stewart model ever turned out so.

Model 3 Engine

This is four-cylinder, "L"-head type, bore 3½ in., stroke 5⅞ in. The unit power plant has three-point suspension. Lubrication is now of the self-contained positive feed type operated by a gear pump.

All valve mechanism is now entirely enclosed and automatically lubricated. Valves are on right side of engine.

Transmission, Rear Axle

Transmission is of selective sliding gear type and has three speeds forward and one reverse. Gears are 3½ per cent. nickel steel, running on annular ball bearings. Gear ratio is 6:1 on high.

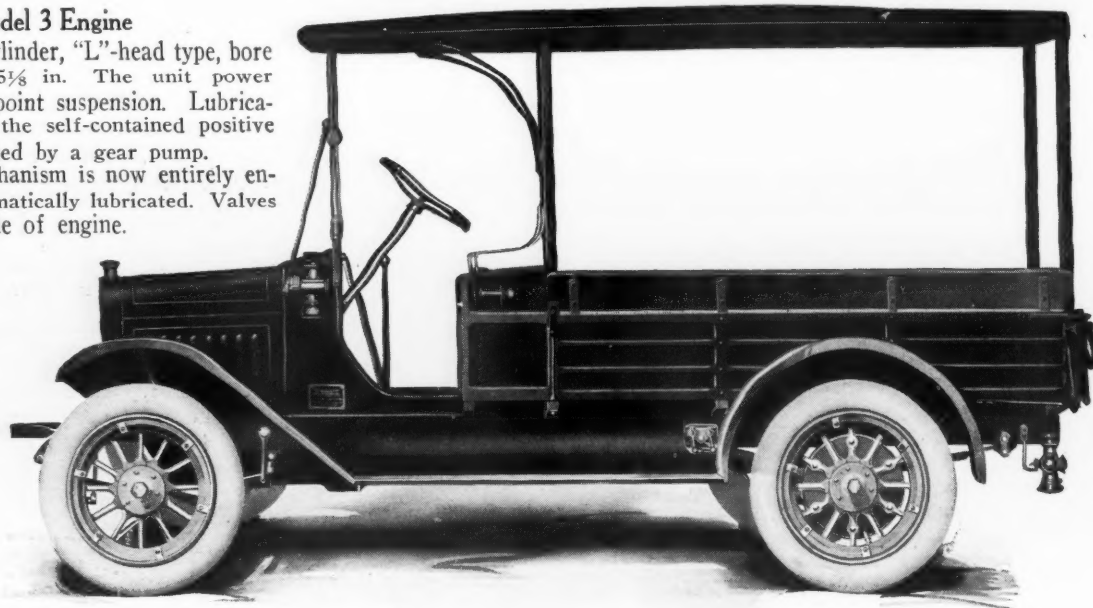
Rear axle is now made in two styles—the Timken spiral bevel, full floating type, and the Celfor. Internal gear axle if solid tires are desired. The pressed steel chan-

Other than the above-mentioned changes, the new model is about the same as the former.

Model 4

This new addition to the Stewart line, the 1¼-ton model, is known as Model 4. It has the same engine as Model 3, same cooling, etc.

The carburetor is a Zenith vertical, non-adjustable type, controlled by foot. Ignition



New Stewart Three-Quarter Ton Truck

This is known as Model 3, and with Model 4 will replace the old Series No. 2 of the same capacity. The new Model 4 will be of one and a quarter ton capacity and will have solid tires

Cooling is by thermo-siphon system, assisted by 16 in., four-blade fan mounted on ball bearings. The radiator is of honey-comb type and located in front of engine instead of at the dash.

nel section frame is now made of 3/16 in. material, and brake drums are 16 in. in diameter. Wheels are stronger, and all rims are demountable type. The loading space is 7 ft.

is by Bosch high-tension magneto with fixed spark. The gear ratio in high is 7:1.

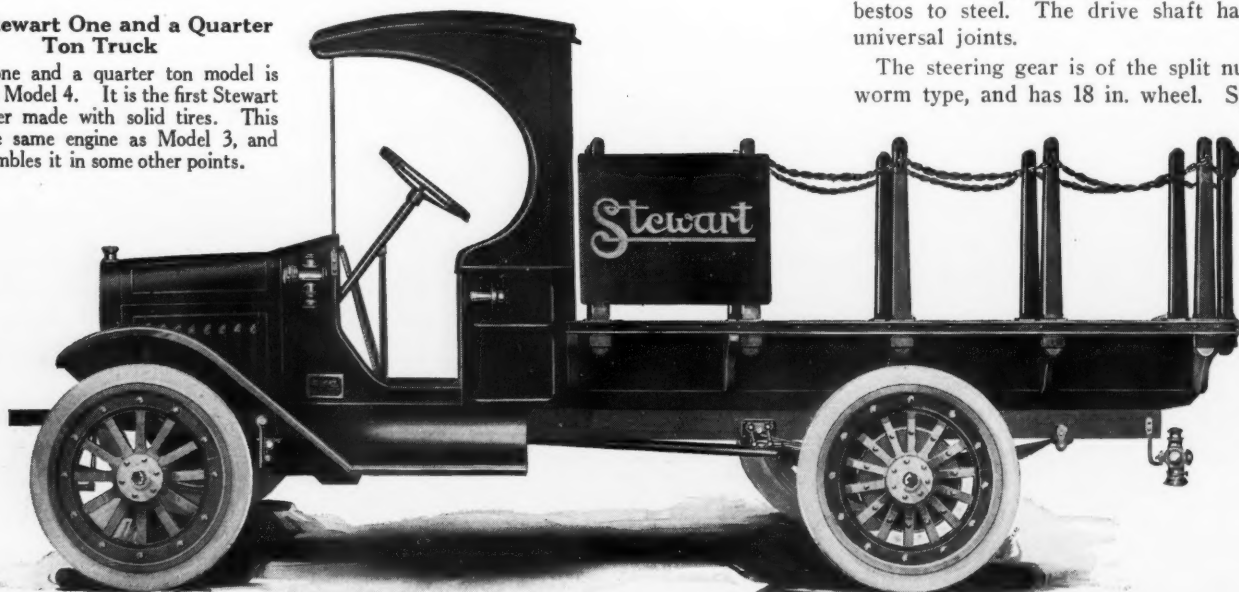
New Stewart One and a Quarter Ton Truck

This one and a quarter ton model is known as Model 4. It is the first Stewart truck ever made with solid tires. This will have same engine as Model 3, and also resembles it in some other points.

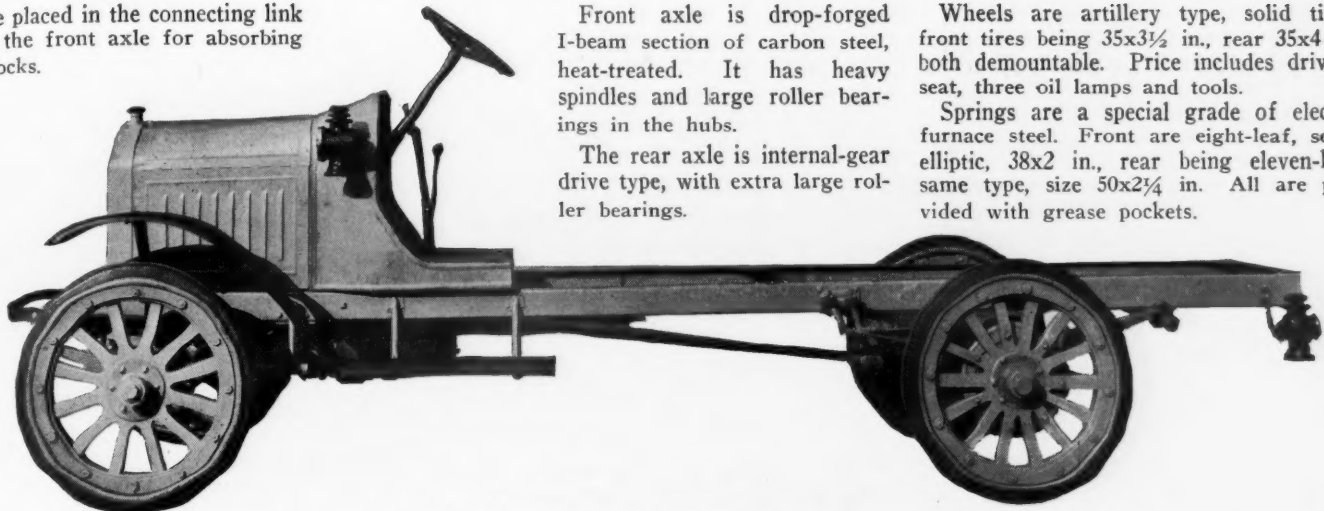
Clutch, Axles

This is multiple disc, dry-plate type, raybestos to steel. The drive shaft has two universal joints.

The steering gear is of the split nut and worm type, and has 18 in. wheel. Springs

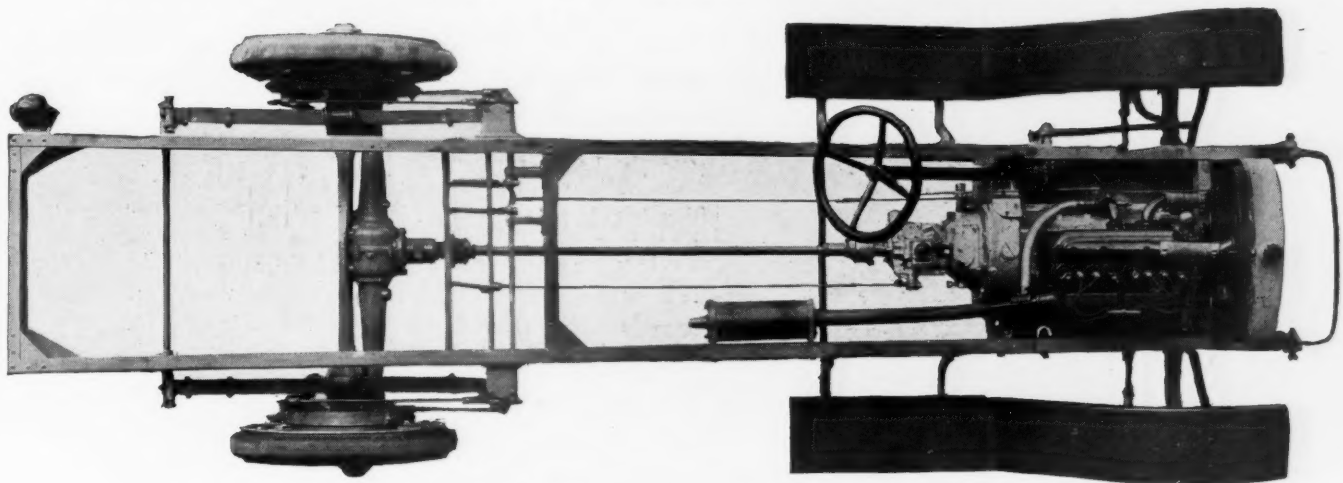


are placed in the connecting link to the front axle for absorbing shocks.



Side View of New Model 4 Stewart Truck

This is the one and a quarter ton capacity truck and an entirely new model. Note the new style hood and position of radiator



Top Plan View of New Model 4 Stewart Truck

This illustration shows clearly the plan of the chassis. This model has internal-gear drive

Falcon Light Truck, Price \$750, With Express or Panel Body



THE recently organized Falcon Motor Truck Co., of Detroit, Mich., has announced the Falcon Truck, a light truck with normal capacity of 1000 lbs., and maximum capacity of 1200 lbs. This truck has 31x4 in. pneumatic tires with demountable rims, 56-in. tread, 106-in. wheelbase, body 42 or 44 in. wide, frame of heavy channel section pressed steel 4x1½x½ in., and Gemmer steering gear, right or left steering.

Unit Power Plant

The engine is a Sterling, 3x4 in., latest model four cylinder, moderate speed type, rated at 22 h.p. Cooling is by the Thermosiphon system, with Candler improved type radiator. Ignition is by Atwater-Kent automatic system, and carburetor is a Zenith.

Lubrication is by constant level splash system, level being maintained by positive action pump which oils all bearings and has sight feed on dash.

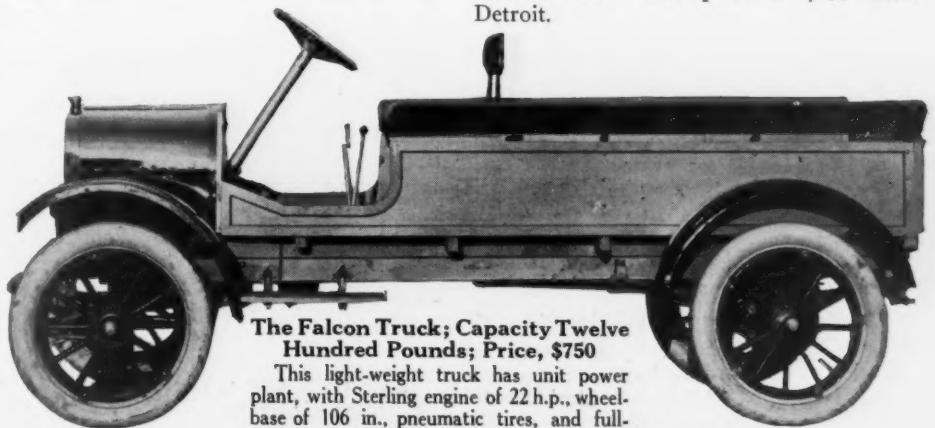
The clutch is cone type. The transmission is selective sliding gear with annular bearings, and has three speeds forward and one reverse.

Axles, Springs

The front axle is "I"-beam section, forged and treated, full roller bearing

type. The rear axle is full-floating and equipped with Gurney ball bearings.

Front springs are semi-elliptic, rear are full platform with steel shackle bolts. Wheels are artillery type. Both brakes operate on 10 in. diameter brake drums. Body is 9 ft. long, with single or double driver's seat. The price is \$750 f.o.b. Detroit.



The Falcon Truck; Capacity Twelve Hundred Pounds; Price, \$750

This light-weight truck has unit power plant, with Sterling engine of 22 h.p., wheelbase of 106 in., pneumatic tires, and full-floating rear axle.

CROCE MOTOR TRUCK HAS STANDARD UNITS: PRICE, \$890



THE latest model Croce Truck, made by the Croce Automobile Co., Asbury Park, N. J., sells for \$890 complete, the electric starting and lighting, a center searchlight and oversize tires being extra. The standard units used in the construction of this truck are well known and reliable.

The first hundred trucks will have Timken axles, A. O. Smith's stamped steel axles to be used after that, although the company expects to make its own axles in the near future and will purchase the necessary machinery.

Unit Power Plant

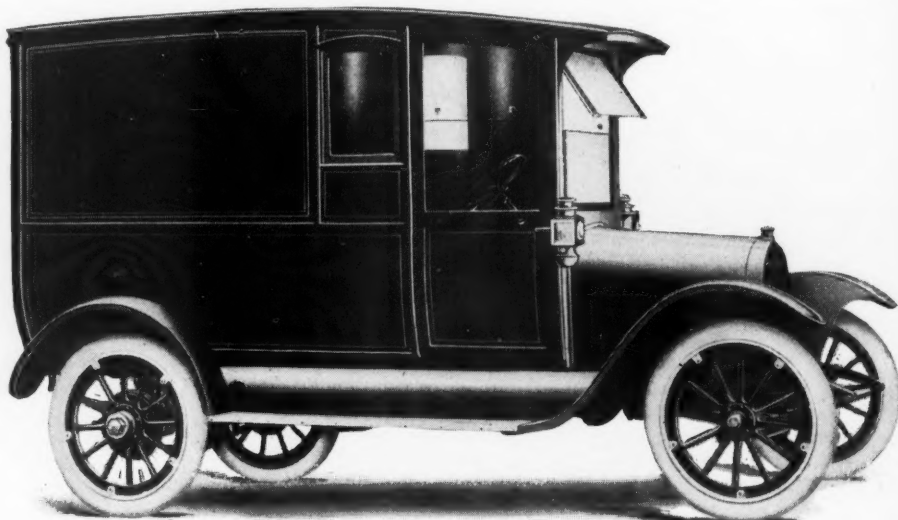
The engine is a Wisconsin Type Q, bore $3\frac{1}{4}$ in., stroke 5 in., four cylinders, "L"-head, cast in block. The A. L. A. M. rating of this engine is 16.9 h.p., piston displacement being 165.9 cu. in.

The transmission is a Brown-Lipe, selective type, three speeds forward and one reverse. Drive is by shaft with two Spicer universal joints to rear axle, which is roller

Oversize extra. Mudguards are of heavy pressed steel. All of the body except the top is made of steel. Front and rear curtains and tailboard included with body. Open express body with front and rear curtains furnished at the same price as closed body, and has the same loading space, 6 ft. x 45 in.

NEW ONE-THOUSAND POUND ATLAS COMMERCIAL CAR, \$775 WITH BODY

The new commercial car from York, Pa., made by the Martin Carriage Works, is of 1000 lbs. capacity, has chassis price of \$660 and announcement is made that deliveries will be started in January. This newcomer

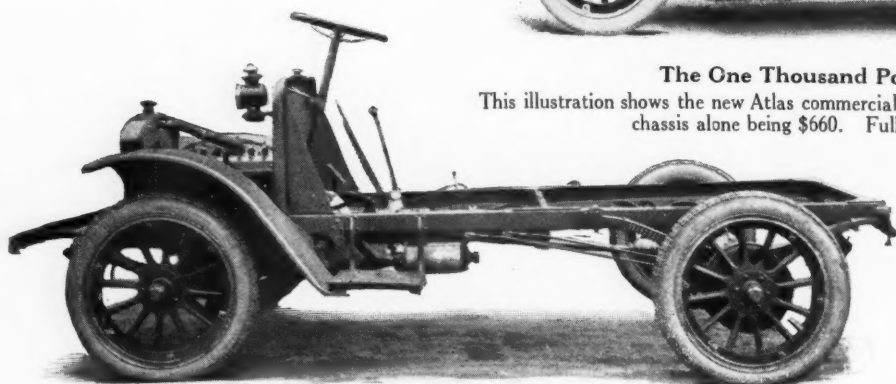


The One Thousand Pound Atlas Commercial Car

This illustration shows the new Atlas commercial car. The price of chassis and body as shown is \$775, chassis alone being \$660. Full-panel body \$725, six-post body \$715

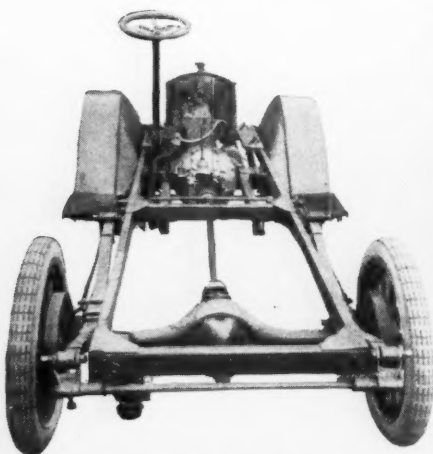
will have 30 h.p. engine, $30 \times 3\frac{1}{2}$ -in. tires, and 106-in. wheelbase. Demountable rims will be in the standard equipment and bodies of thirty styles can be had.

The engine is four-cylinder, bore $3\frac{1}{4}$ in., stroke 5 in. The Carter carburetor will be used, and ignition will be by Dixie Magneto. The clutch will be of the cone type, and transmission will be full roller bearing. Front axle will be "I" beam section, rear three-quarter floating. Semi-elliptic springs will be used front and rear. Gear ratio will be 4:1.



Side View of Croce Truck

This is the Croce truck, which has unit power plant, Wisconsin engine of 16.90 h.p. Wheelbase is 88 in. Loading space in rear of seat is 6 ft. long and 45 in. wide



Rear-End View of Croce Truck Chassis

This shows the unit power plant suspension clearly. This model has center control and left drive. Wheelbase is 88 in.

bearing. Ignition is by Bosch high-tension magneto.

General Details

The frame is of pressed steel, heat-treated, riveted by hot process. Dash is one-piece pressed steel. Tires 32×4 in.



Chase Hotel 'Bus' Used by the Onondaga Hotel Company of Syracuse

This classy-looking body is mounted on a two-ton Chase Model R worm-driven chassis. Pneumatic tires are used in front and dual cushion in the rear. The body seats twenty passengers and has two doors, front side and rear side entrances; French bevel-plate windows, raised and lowered with patent hand wheel. Seats upholstered in grey silk mohair; right-hand drive; clear-vision windshield; heated by radiators from exhaust.

The CCJ brings greatest returns to advertisers because of largest circulation among quantity buyers

New KisselKar Model Has Worm Drive and Capacity of Three-Quarters to One Ton



IN ITS new line of seven chasses sizes of commercial vehicles for the 1916 season the Kissel Motor Car Co., of Hartford, Wis., has announced a new three-quarter to one-ton worm-drive truck to sell for \$1250.

Engine

The engine is Kissel-built, bore $3\frac{7}{8}$ in., stroke $5\frac{1}{2}$ in., cylinders cast in block, valves enclosed. Crankshaft is extra large, heavy drop-forging, mounted on high quality steel-backed, Babbitt-lined bearings.

Lubrication is by constant level splash and force feed system. Oil is strained. A Kissel design Stromberg carburetor is used, fed by vacuum system. Ignition is by high tension magneto.

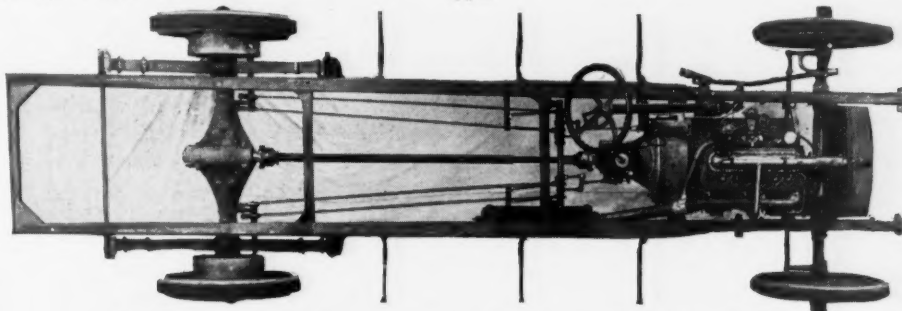
The unit power plant has three-point suspension.

Drive is shaft to worm drive axle, which has heavy bevel gears in the differential. Tread is 56 in., wheelbase 132 in. Both brakes operate on rear wheel drums, and have equalizers.

rear. Wheels are second growth hickory of special commercial vehicle S.A.E. artillery type.

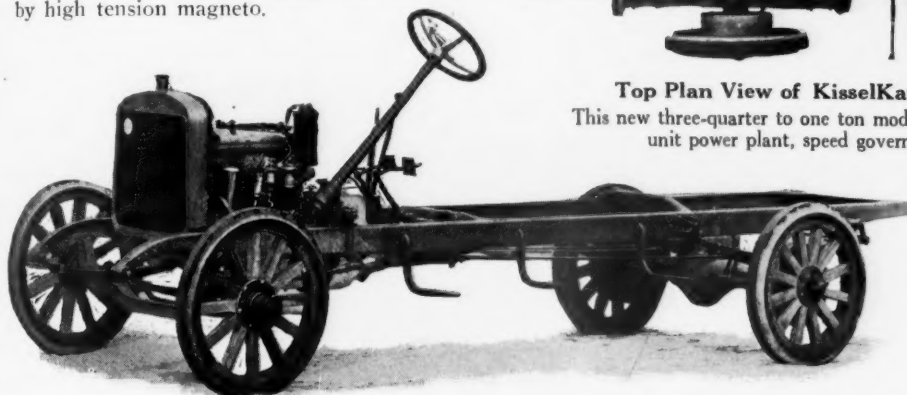
Springs are semi-elliptic front and rear, and of special alloy steel, front being $38 \times 2\frac{1}{4}$ in. rear $50 \times 2\frac{1}{2}$ in.

The steering gear is split nut and worm type.



Top Plan View of KisselKar Three-Quarter to One Ton Chassis

This new three-quarter to one ton model has David Brown worm drive construction axle, unit power plant, speed governor, pneumatic or solid tires being optional



Side View of Chassis of New KisselKar Truck

This illustration shows the new three-quarter to one ton truck, which has worm drive, Kissel-built engine, and wheel base of 132 in. Price, \$1250

Clutch

The clutch is cone type, leather faced, with adjustable spring inserts. The transmission is selective sliding gear type and has three speeds forward and one reverse.

Governor Wheels

The governor allows a car speed of about 20 m.p.h. The turning radius is 25 ft. Tires optional, pneumatic $35 \times 4\frac{1}{2}$ in., or solid 34×3 in. on front and 34×4 in. on

Body, Other Models

A standard express body is furnished for \$150 additional or special bodies are built to order.

The material used and the mechanical details of the other six models of Kissel Kar trucks are similar to the $\frac{3}{4}$ to 1-ton truck except that the 1000-lb. delivery is shaft driven, and the $2\frac{1}{2}$ to 3, $3\frac{1}{2}$ to 4 and 6-ton sizes are chain driven. The 1 to $1\frac{1}{2}$ and $1\frac{1}{2}$ to 2-ton trucks have the David Brown worm drive construction, the same as the $\frac{3}{4}$ to 1-ton.

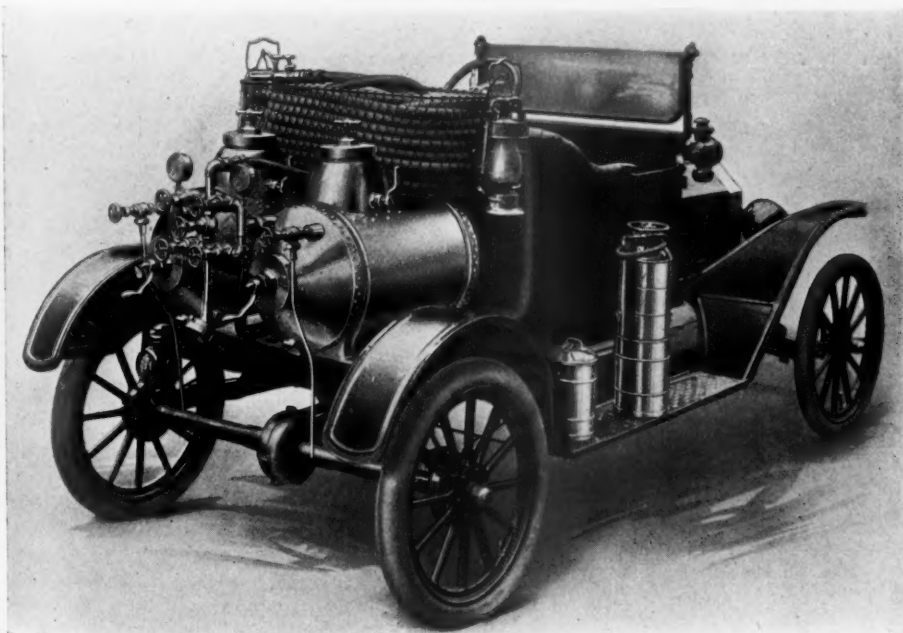
FORD RUNABOUT TRANSFORMED INTO CHEMICAL WAGON

The illustration shows a Standard Ford runabout transformed into a chemical wagon. This is particularly interesting at this time on account of the wide interest in motor driven apparatus, as it shows how a comparatively small town or village can purchase motor apparatus at a reasonable cost.

This Ford runabout is left just as received from the factory. The top and cover back of the seat were removed and two "Utica" Holloway twenty-five gallon tanks, hose basket with 150 ft. of $\frac{3}{4}$ -in. chemical hose and nozzle, two "Utica" No. 6 Special Fire Department Extinguishers, two lanterns and two canisters for extra charges were installed thereon.

The equipment is manufactured by the O. J. Childs Co., of Utica, N. Y., for the Fire Department of Laredo, Texas, Mr. C. C. Biggio, chief, and will be installed by them on a Ford chassis.

A thirty-five gallon tank which will fit crosswise, with hose reel and small hose body can be furnished if desired.



Ford Runabout Fitted With Chemical Outfit, Made by the O. J. Childs Company, Utica, N. Y.

Don't fail to get the January and February issues of THE COMMERCIAL CAR JOURNAL. These are complete review numbers, showing all the commercial cars in the country and constitute the only truck show.



VARIABLE SPRINGING: A BRITISH DEVELOPMENT IN THE RIGHT DIRECTION. LOADED AND UNLOADED WEIGHT

By OUR FOREIGN CORRESPONDENT



IT IS curious how little the difference in conditions between running light and loaded has been realized by designers of commercial cars—in Europe, at any rate. The explanation is probably in the main due to the fact that hitherto for economic reasons the commercial car has had to be treated as entirely secondary to the private

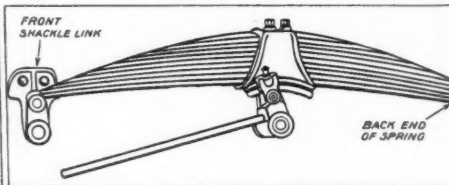
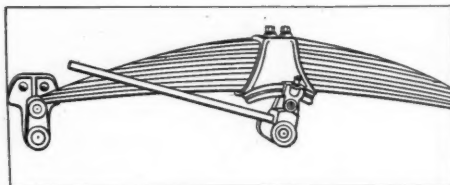
improvements in general have been effected in this direction.

The Principle of the North Suspension

Recently, however, O. D. North has brought out and devised a scheme for variation of the springing to suit varying running conditions, and although primarily intended for light private cars, and confined to the cantilever system of springing, it certainly shows a movement in the right direction.

Its action depends upon varying the length of the spring by altering the position of the fulcrum. Obviously the shorter the spring the stiffer it is in its action, and the

front part. The working of the cantilever spring, therefore, partly depends upon the length in front of the rotating fulcrum being shorter than that behind; thus the rear part of the springs takes the lighter and less rapid road shocks, the front part the stiffer and more rapid shocks, such as is experienced on the *pavé* of French roads or stone sets in English towns. The rear end of the spring therefore acts, so to speak, directly, while the action of the front end is transmitted indirectly through the rest of the spring. Mr. North's system of spring variation depends upon varying the length of these two parts of the spring, more particularly the length of the back end, and though this method is very far from ideal (for it reduces the range of shocks over which the spring can act), it is a step in the right direction.



Variable Springing

The drawing at the left shows the spring set for heavy loads, while the one to the right shows the spring set for light load, with swinging fulcrum toward the front

car, and its design has consequently followed more or less along private car lines. Now the private car of the past, especially in Europe, has been a vehicle the weight of which has been large relatively to the weight of its load, and therefore the load does not make any great difference to its running. The advent of the light car and light van, however, has made people realize that the lighter the car the more difficult the springing problem; partly because difference between weights on the springs loaded and unloaded is much more extreme than in heavier automobiles, and partly because the speed, being nearly the same as that of the heavier cars, the horizontal co-efficient of the road shock is not only not proportionately less, but cannot be absorbed as it can with heavier vehicles.

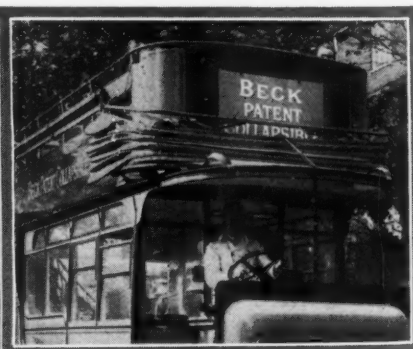
Big Differences in Commercial Car Loads

Yet it is none the less curious that commercial car designers should have waited for the private car to teach them. For them the big difference between the weights on the springs loaded and unloaded existed from the first, and though it is true that horse-drawn vans and one or two automobile trucks, as for instance the Leyland and Wells in England, and one or two French makes, have been provided with additional springs that come into action as the main springs are pressed down with the load, no

quicker its period; the longer the spring the slower and lighter its action. Now the true cantilever spring is anchored at its front, and nearly midway of its length it is secured to the frame in such manner that it can pivot round the point at which it is secured. We thus have a spring whose action is checked by the anchorage of the

THE \$10,000 AMBULANCE-DESIGNING COMPETITION

Some months ago in these pages we gave particulars of an ambulance designing competition that had been organized by the Ambulance Construction Committee. This body had been formed to organize the competition for \$10,000 in prizes by the Wellcome Bureau of Scientific Research in London. Designs were received up to the end of June. Our London representative has been officially informed that the competitors who entered up to the time of closing the competition numbered no less than 233, and the selected designs are being built and fitted to War Office chassis, which will be tried at the front.



A Boon for 'Bus Passengers Caught in the Rain

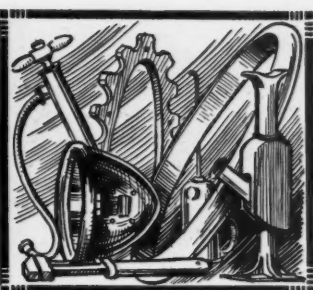
The provision of a light and adjustable protection for the upper deck of the ordinary motor 'bus is a much-needed improvement, which has not hitherto been seriously attempted. A successful covering has now been designed and is expected to soon become

of universal use. The smaller illustration shows the hood closed down in fine weather. We trust the maker will not attempt to label it a "one man" 'bus top.

The CCJ has most advertisers because it gives them biggest returns



TRUCK ACCESSORIES AND APPLIANCES



NEW RUSSEL TWO-TON INTERNAL-GEAR REAR AXLE

Russel Motor Axle Co., North Detroit, Mich., well-known manufacturer of jackshafts, has recently completed its 2-ton internal gear rear axle, which is illustrated herewith.

This axle combines a forged steel fixed axle with a light, high-speed jackshaft. The latter is placed in front of and slightly below the steel bar axle and is attached thereto by means of flanged couplings bolted to the brake support casting and by an arm placed near the center of the axle. This arm is cast integral with a split sleeve which slides over the dead axle, and a bolt is inserted through a hole in the end of the arm into a threaded boss on housing of the live axle. The drive is taken direct through pinions and internal gears attached to the road wheel hubs, and, being applied to the wheels away from the center, reduces stresses in the driving system which can be made smaller and lighter.

The jackshaft is easily dismantled by the removal of one rear wheel. The truck

is protected from mud and grit. The axle is not sensitive to accidental lack of lubrication or minute misadjustments of parts.

DIE-CAST BABBITT BEARING WITH STEEL INSERT

A die-cast bearing of compressed babbitt, with a steel frame inserted deep within the babbitt, for stiffening and strengthening, has been put upon the market by The Stewart Manufacturing Co., 323 Wells St. Chicago. This bearing is already being used extensively in the better grade automobiles, and in other machinery where good bearings are important.

A steel insert is set within the metal of the bearing itself, in such a manner that the babbitt is much heavier on the surface toward the shaft, than it is at the back. The thin babbitt coating at the back serves to act as a cushion for the seating of the bearing, into whatever slight inequalities there may be in the machining of the backing. This reinforcement not only gives the bearing maximum rigidity, and reduces

factory engineer who has to figure on quantity production. The feature of the watch is that it eliminates the usual amount of calculation necessary with the ordinary stop watch, and shows in actual figures



Silberberg Time Study Watch

This watch tells at a glance the elapsed time required for a job and the output per hour

the time required for a certain job and the output per hour. The instrument is a Swiss product of very high grade, and lists at \$15. It is sold in this country exclusively by Mortimer J. Silberberg, Peoples Gas Building, Chicago.

IMPROVED EASYON CHAINS FOR SOLID TIRES

The Leather Goods Co., of Niagara Falls, N. Y., announces that its Improved Easyon Truck Chains are now ready for delivery. They are single-cross chains



Steel Bar Which Carries Load in Russel Axle

This steel bar relieves the jackshaft of all carrying strains. It is made from 1½ per cent chrome-nickel steel, 30-40 carbon

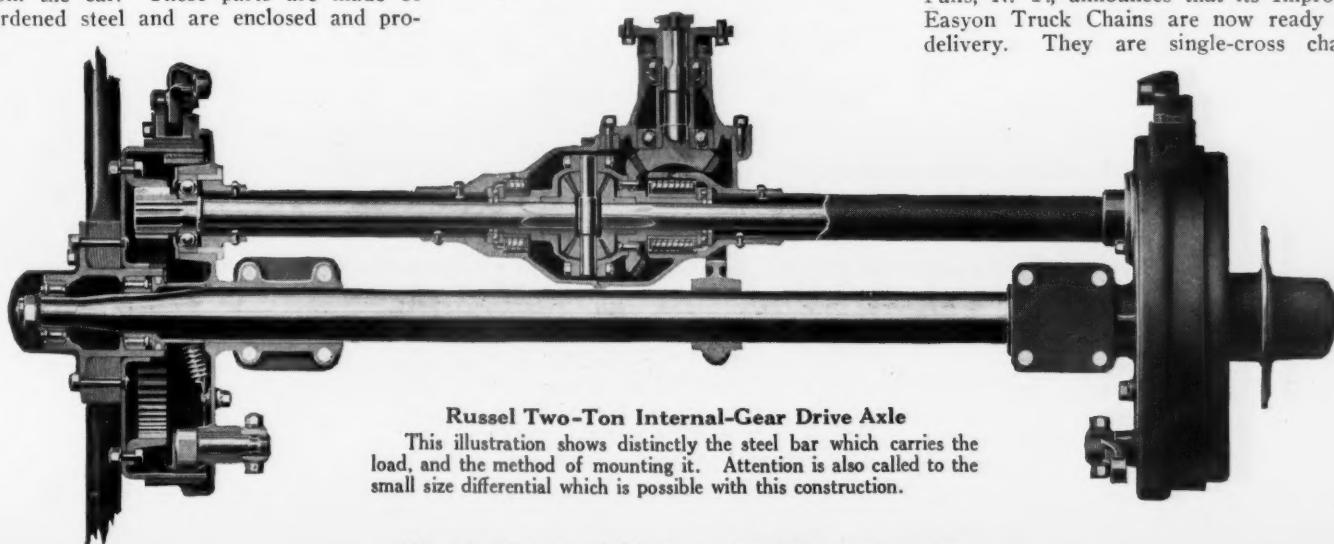
load is carried entirely on the solid forged steel axle, without joints or connections. This axle is specially designed to have the torque and drive taken through the springs.

Both sets of brakes, one expanding and the other contracting, are carried on the rear wheels. All the working parts are readily accessible when removing axle from the car. These parts are made of hardened steel and are enclosed and pro-

the cost of the bearing, but as it is die-cast under pressure the composition of the casting is remarkably compact and strong.

TIME STUDY WATCH

This watch meets all requirements where factory output or time of operations are to be figured and should prove of value to the



Russel Two-Ton Internal-Gear Drive Axle

This illustration shows distinctly the steel bar which carries the load, and the method of mounting it. Attention is also called to the small size differential which is possible with this construction.

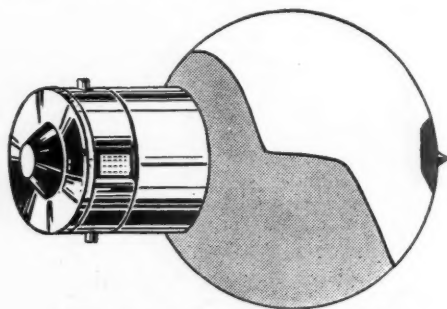
held on the tires by fastening to the spokes.

The fastener consists of two galvanized snaps connected by galvanized steel links curved to fit around the opposite sides of the spoke. One link has a hook on one end, making it possible to clasp it around the spoke very quickly and easily. The fastener is covered with leather where it comes in contact with the spoke and fellow, and will not mar the paint.

The cross chains are made of heavy twisted welded links. By snapping into the different links the chains can be adjusted to the different sizes of tires. Easyon Chains are packed with a set of eight in a bag. They are made in three sizes: Small size fits single tires no larger than 3 in., \$3.20 per set; medium size fits single tires 3 in. to 6 in., \$5.60 per set; large size fits dual tires, \$6 per set.

THE "MAC KNO-GLARE LAMP BULB"

As will be noted from the illustration, a portion of the lamp bulb is treated with a semi-translucent compound, this compound being placed upon the bulb in a peculiar form and in certain proportions, and it is claimed by the manufacturers that every



The "Mac Kno-Glare Lamp"

The shaded portions indicate that part of the bulb which does not permit the light to pass through readily.

ray of light emanating from the lamp filament is absolutely controlled, and the glaring rays done away with.

The base is, in size and dimensions, exactly the same as the standard Ediswan base. The Mac Kno-Glare (Swivel Bulb) Auto Lamp, however, has the pins, which hold the lamp into the Ediswan socket, mounted upon a separate ring, which fits into a recessed portion of the lamp base. The lamp is installed identically the same as in other lamps, but when locked in the socket, the bulb may then be rotated to bring the treated portion of the bulb at the bottom part of the reflector, this being done done without in any manner necessitating the changing of the position of the socket, regardless of the year or make of car.

After the lamp has been properly placed in the socket, when the current is turned on, it will be noted that the clear portion of the lamp bulb, being at the top part of the reflector, permits the light rays from the filament to strike the upper portion of the reflector, and the light rays are deflected in an intensified form upon the roadway. The treated portion of the lamp bulb, however, being at the bottom of the reflector, the light rays are subdued and controlled, and the light which would ordinarily be reflected up in the air and

which causes dazzle and glare, is softened, and it is possible to look directly into a pair of headlights without obtaining a particle of the dazzling or glaring light.

These lamps are made in all candle powers and voltages, in both single and double contact, for all makes of cars. The entire sales are controlled by A. Hall Berry, 97-99-101 Warren Street, New York City.

NEW SPARK PLUG OF A C TITAN DESIGN

The Champion Ignition Co., of Flint, Mich., has recently placed on the market a new size plug in the well-known A C Titan design. This new plug is known as the long body $\frac{7}{8}$ A C Titan. It has the

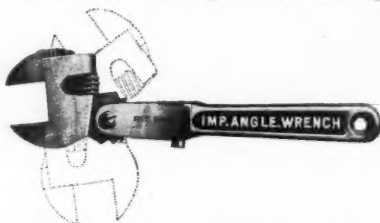


The A C Titan Long-Body Plug

standard S.A.E. $\frac{7}{8}$ -18 thread, but differs from other A C Titan models in that the body of the plug is considerably longer so that it is particularly adapted to motors having the plugs located in a deep recess.

NEW WRENCH OPERATES AT VARIOUS ANGLES

The Imperial Tool Co., of Bloomington, Ill., has recently brought out an adjustable handle angle wrench, in which is incorporated a number of advantageous features. The adjustable jaw will take any tap up to $1\frac{1}{4}$ in. at eight different angles.



The Imperial Wrench Which is Adjustable to All Angles

or the tap can be turned in very close quarters by ratcheting the handle one or more notches at a time in either direction, by simply pressing the ratchet button. When the button is released, the handle is locked rigidly.

THE J. B. D. RESILIENT WHEEL FOR TRUCKS

The feature of this new wheel is that it provides a means of using solid tires on a truck of any size, still at the same time giving the easy riding qualities of the pneumatic. The cushioning effect is produced by the rubber sections, which are set around the hub of the wheel. These rubber cushions prevent all shocks and jars



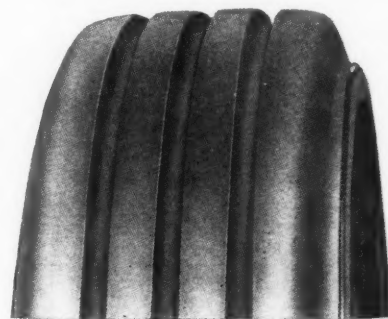
J. B. D. Resilient Wheel

from reaching the rear axle or the car. Especial attention is called to the use of these wheels on light delivery cars, where high speed is the essential factor. This wheel is claimed to save 80 per cent. of the cost of maintenance of a truck. The J. B. D. Resilient Wheel Manufacturing Co., of Milwaukee, Wis., is the maker.

FIRESTONE BRINGS OUT SOLID TIRE TWELVE INCHES WIDE

The chief object of this tire, made by the Firestone Tire and Rubber Co., Akron, Ohio, is to replace dual equipment in special services, such as on roads with a decided crown, or on unpaved roads.

The Firestone Giant tire is made in the channel steel hard base pressed-on type. The Giant tire is made in three sectional sizes—8, 10, and 12 in. The 8 in. is over-size for dual 4's having about the same



Section of the Firestone Giant 12 in. Tire

volume of rubber as 5-in. duals. The 10 in. is over-size for 5-in. duals, that is, the same volume of rubber as 6-in. duals. The 12 in. is over-size for 6 in., comparing in rubber volume with the 7 in.

As originally made, this tire had an extremely high tread. After very thorough experimenting, the design of the tire was changed. Instead of the solid, round section, the present Giant tire has a flat tread, with two circumferential flutes in the 8 and 10 in. sizes and three flutes in the 12 in.

Under the most extreme conditions of service, these tires have convinced the manufacturers and the truck operators that this tire has been designed along the right lines for heavy service. The great volume of rubber gives a maximum resiliency. The wide, flat fluted tread gives high attractive qualities and effectively prevents skidding.



Motor Truck Design and Construction Made Plain Advantages and Disadvantages of Different Types Discussed

By C. T. SCHAEFER, Member Society Automobile Engineers

This is the twenty-first installment of a series of articles by this well-known writer, covering in a non-technical way the various constructions now current practice in commercial car design. These articles take up, in order, the general types of chassis, the advantages and disadvantages of each, illustrated by simple diagrams, and in logical order, motor construction, ignition, carburetion, cooling, lubrication, etc., until each part of the truck has been dealt with.

PART XXI

SPRINGS AND SUSPENSIONS

COMMERCIAL CAR bodies are mounted upon the chassis frame, the latter being supported on the axles through the intermediary of steel springs. These springs are built up of a number of plates varying in length and are used exclusively to support the body, although coil springs are used as auxiliaries.

The upper leaf of this spring usually has an eye at each end for connection to spring brackets on the frame, or shackles. In some few cases the ends are left flat and fit in brackets so that the frame rests directly on them. The balance of the spring consists of a number of shorter leaves, the lengths of which decrease uniformly, except in cases when they are required to carry very heavy loads, in which the first two or three leaves are of the same length. The various leaves are held together by a center bolt or a band.

The method of frame connection depends upon the type of spring and various other factors while the axle connection is usually made by box clips and a spring seat on the rear axle. This seat is sometimes called a perch, and may be formed integral, or attached to the axle.

Spring Types

The simplest type of spring is the semi- or half-elliptic type, while all other types are made up wholly or in part of the

former. They may be termed combinations of the semi-elliptic type.

The three-quarter-elliptic type consists of a semi-elliptic lower member and a quarter-elliptic top member. These two members are joined by shackles and bolts at one end. This type of spring is used on pneumatic tired vehicles only at present.

narily termed the platform spring, since the true full platform spring consisting of two side and two cross semi-elliptic members is not adaptable to the ordinary chassis construction.

Auxiliary springs consist of a half-elliptic with plain ends. The cantilever spring carries the weight at its small end and may

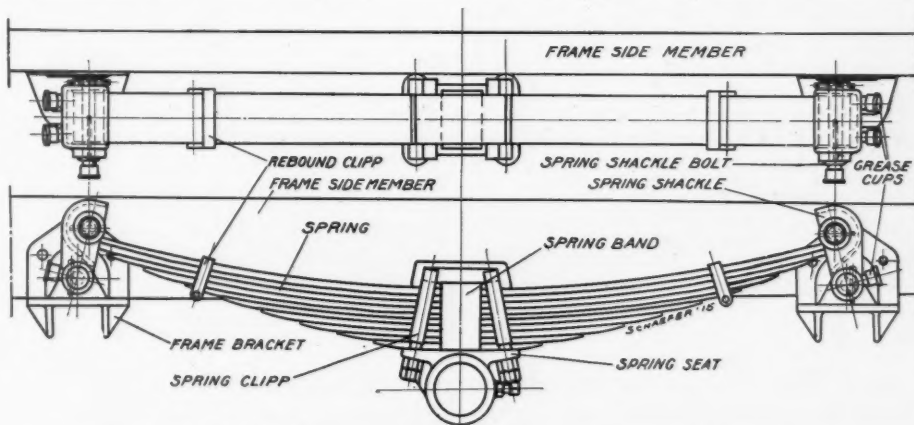


Fig 1. DeKalb Spring, Mounted Outside of Frame and Over Axle

This permits carrying the frame low, and the main leaf has an eye at each end which is connected to the frame by means of shackles and bolts, through-riveted to the frame

The full-elliptic spring consists of two semi-elliptic members joined at both ends by bolts or shackles and bolts.

The three-quarter platform spring consists of two semi-elliptic side members and one semi-elliptic cross-member, the side members being joined to the cross-members by shackles and bolts. This type is ordi-

either be quarter-elliptic; in which the big end is secured to the frame or a semi-elliptic; in which case it has a pivot support on the frame at or near its center, and is connected to the rear axle at its rear end.

There are also various other combinations, however they are not employed at present, and consequently are not within the scope of this article.

Semi-elliptic a Favorite

Regardless of capacity, the semi-elliptic suspension is a decided favorite. It is simple, and if the length, width and other dimensions are proportioned correctly, nothing better than the semi-elliptic spring for front and rear suspension could be desired.

The remaining spring suspensions employed at present may be classified as follows:

Semi-elliptic front, full-elliptic rear.

Semi-elliptic front and three-quarter-elliptic rear.

Full-elliptic front and rear.

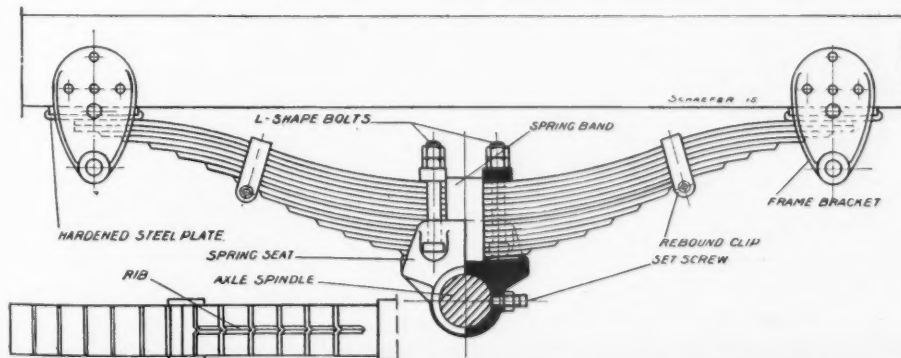


Fig. 2. Mogul Six-Ton Rear Spring With Plain Ends, Showing Method of Mounting on Axle

The CCJ has most readers because it gives most information

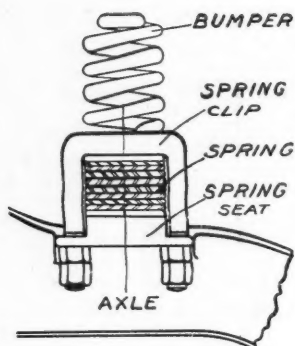


Fig. 3. Mogul Six-Ton Front Spring Mounting

The spring seat is a steel casting which fits over the axle

Semi-elliptic front and three-quarter platform rear.

Full-elliptic front and platform rear.

Another point worthy of note is the substitution of the true sweep spring and the elimination of the double sweep spring. Having a simple curve, the true sweep spring is easy to fit, and spring makers recommend them on this account. The double sweep spring is simple to mount and has a legitimate place on every truck as an auxiliary or overload spring. Comparison of these two types may be made by referring to the Figs. 1 and 2, the former being a true sweep and the latter a double sweep spring.

Until recently, very few springs were equipped with bumpers; however, in most

cases. The leaves are held together by means of a steel outer band which is shrunk over them. The spring is attached to the axle by means of a spring seat which is mounted on the axle spindle and prevented from turning by a set screw. Box clips of square section, placed at an angle are used to hold the spring to its seat. Two nuts are used to hold the spring rigid, while the upper ends of the clips are held in position by a pressure block on the top of the spring which fits snugly over the center band.

The front spring is of similar construction, however, the front end of this is attached directly to the front bracket, while

also mounted on the axle spindle, however, in place of the usual box clip. Four heavy bolts with a T-shaped head are used. The bolts fit into grooves formed into the walls of the spring seat and the heads of the bolts fit into rectangular holes cast into the seat. Two flat bars are used as a pressure block and are retained by washers and nuts. The front spring is connected to the frame at the forward end by an eye and a shackle bolt, while the rear end is plain and rests against a hardened plate on the bracket. The method of axle mounting is similar to the rear; however, clips are used in place of bolts, while the spring seat is a steel casting, which fits over the axle as

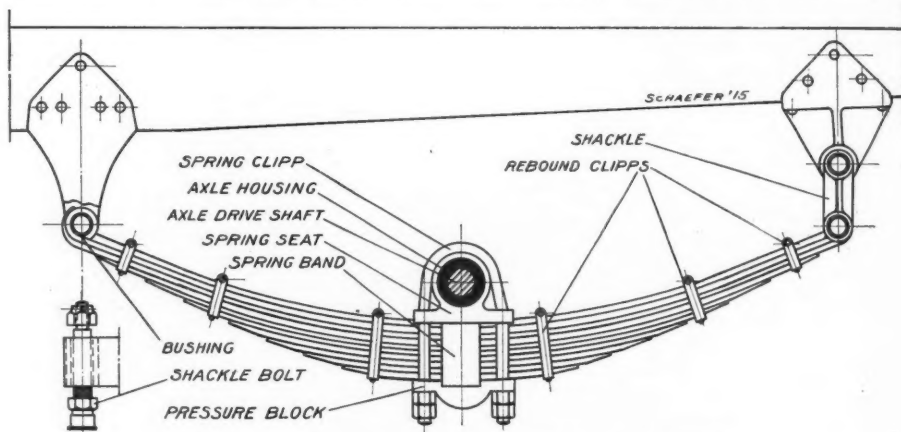


Fig. 4. Chase Underslung—Shackled at One End

The rear springs pass under, instead of over the axle and take both the torque and the driving thrust

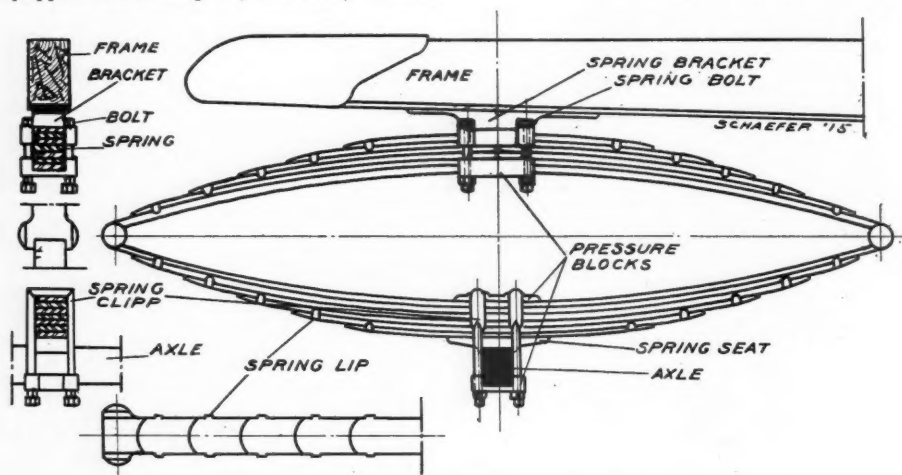


Fig. 5. I. H. C. Full-Elliptic Front Spring

Springs are clipped to both the frame and the axle. The ends of the spring members are connected by bolts

cases these are in the form of coil springs, and on some vehicles they are made of a heavy square section.

The general construction of the various types can readily be understood by referring to accompanying illustrations; however, the method of frame suspension and axle mounting warrants discussion.

De Kalb Springs

Fig. 1 illustrates the De Kalb rear spring, which is of the semi-elliptic true sweep type. These are placed outside of the frame to permit carrying the frame low, and the main leaf has an eye at each end which is connected to the frame by means of shackles and bolts through brackets riveted to the frame. All bearing surfaces are provided with removable bushings and grease

the rear end is shackled to its bracket. The necessity of directly connecting the forward end of a front spring to frame is due to the fact that this is the only connection between the frame and the axle, the spring being utilized to hold the front axle in position. This is also true of the forward end of a rear spring when the torque and driving thrust is taken through the spring. This feature was explained in a previous chapter on the final drive.

Mogul Springs

In Fig. 2 is shown the Mogul 6-ton rear spring, which is of the semi-elliptic double sweep type with plain ends. These ends fit between the webs of the frame bracket, which has a hardened steel plate resting on the spring. In this case the spring seat is

shown in Fig. 3. The clips pass through holes in the seat proper which coincide with grooves cut into the upper flange of the axle. Tapered washers and nuts hold these together.

Chase Springs

On the Chase worm driven models, the rear springs, Fig. 4, pass under instead of over the axle, and also take both the torque and the driving thrust. For this reason it is necessary to rigidly connect the front end of the spring to the frame, while the rear end is shackled to compensate for elongation under load. Conditions are reversed in the axle mounting, as the pressure block is placed under the spring and the spring seat over it. These are held together by clips of "U"-shape which pass over the axle.

Fig. 5 depicts the full-elliptic front spring used on the I.H.C. 1000-lb. vehicles.

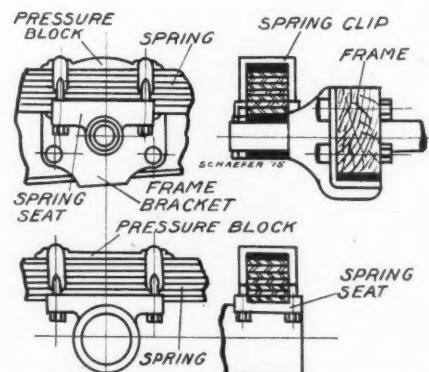


Fig. 6. Method of Mounting I. H. C. Full-Elliptic Rear Spring

A bracket is attached to the frame through which the spring passes

They are clipped to both the frame and the axle. This type of spring consists of two semi-elliptic members, one mounted above the other, and are connected at their ends by bolts. This type is also employed on the rear end of these vehicles, however, instead of rigidly connecting the upper member to the frame; this is pivoted on a shaft as shown in Fig. 6. A bracket is attached to the frame, through which the shaft passes. The upper spring seat pivots on this shaft and has the spring clipped to it as shown. The object of pivoting the upper end of the rear spring is to compensate for the spring play since the only connection between the axle and frame with this type of spring is through the radius rods.

Mack Springs

Fig. 7 illustrates the three-quarter platform rear springs used on the heavy duty Mack trucks. The rear ends of the two

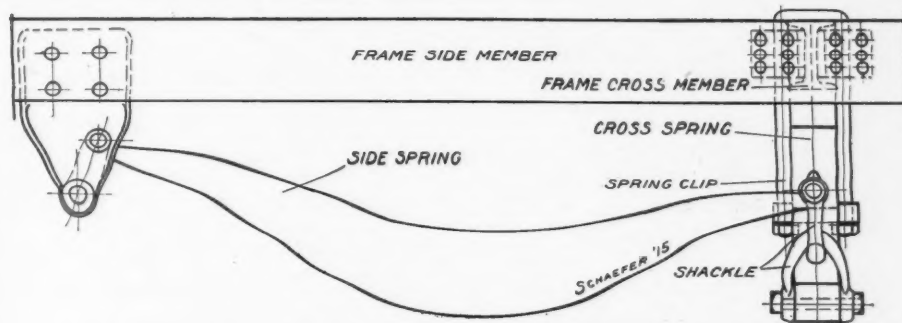


Fig. 7. Three-Quarter Platform Spring Used on Mack Heavy-Duty Trucks
The rear ends of the two side members are connected by double shackles

wheel of the trailer. There is no connection between these and the tractor frame, so that they carry the weight of trailer and load only. The tractor frame is mounted on a cantilever spring, having a pivot near its center and a shackle at the front end.

a check for excessive deflections. Two of these coiled springs are used one on each side.

The Vulcan 5-ton front springs, Fig. 11, are mounted on a seat forged integral with the front axle, and are retained by long studs which have a shoulder near their center and by a drop-forged pressure block.

The Velie 3-ton vehicles have a rear axle of round section and cast spring seats which are held in position by a heavy bolt passing through the axle. The spring leaves are held together by a center bolt which passes through the pressure block. Long box clips are used to attach the spring to its seat, as shown in Fig. 12.

Peerless Springs

On the Peerless trucks the front springs are mounted on a seat forged integral with the axle, and are retained by box clips. Fig. 13 illustrates this, and it will be noted

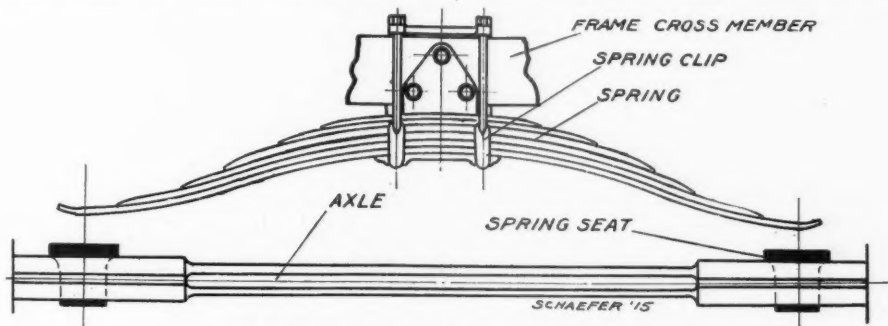


Fig. 8. I. H. C. Overload Spring With Separate Seat

It is attached to a cross frame member at the center and the ends are free, so that they may make connection with a separate spring seat

side members are connected by double shackles consisting of two substantial "U"-shaped members which are hooked together, the same as on numerous horse-drawn vehicles.

Fig. 8 illustrates the overload or auxiliary spring which is usually a semi-elliptic member of the double sweep type. It is attached to a frame cross member at the center and the ends are free so that they may make connection with a separate spring seat or a pad on the pressure block of the side spring when a predetermined load has been applied.

Knox Tractor

The Knox Tractor employs an unusual method of suspension, Fig. 9, which combines a cantilever and semi-elliptic spring at the rear end of the frame. Heavy semi-elliptic springs are attached to the rear axle with long clips and carry the fifth

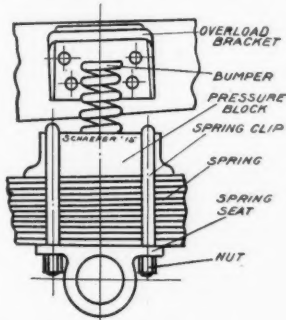


Fig. 10. Selden Spring Mounting

There is a heavy-pressure block which is grooved to take the U-shaped clips

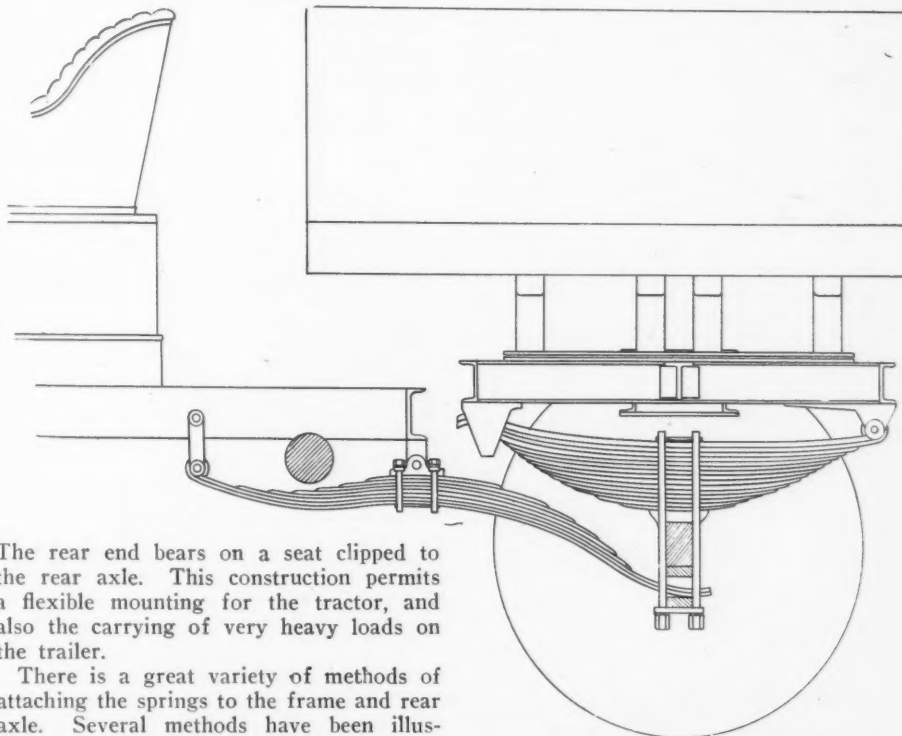


Fig. 9. Knox Tractor Cantilever Rear Spring

This is a combination of a cantilever and semi-elliptic spring at the rear end of frame

The rear end bears on a seat clipped to the rear axle. This construction permits a flexible mounting for the tractor, and also the carrying of very heavy loads on the trailer.

There is a great variety of methods of attaching the springs to the frame and rear axle. Several methods have been illustrated above, while the following gives an excellent idea of the attention that is being devoted to this vital point.

Selden Construction

The Selden construction, Fig. 10, has a heavy pressure block which is grooved to take the "U"-shaped clips and carries a heavy coiled spring which contacts with a bracket riveted to the frame and acts as

that a coil spring is attached to the pressure block which acts as a bumper. Under excessive deflections these springs strike the bottom flange of the frame and arrest the rebound motion of the vehicle spring.

The Jeffrey Quad also employs a spring bumper which is made of flat metal and is termed a volute spring. This is attached to a bracket fastened to the pressure block, as shown in Fig. 14.

The Garford worm driven models have the springs mounted outside the frame and the bumper springs, which are of square section are mounted directly under the frame side. The vehicle springs are retained by "U"-shaped clips and a heavy pressure block, while the seat for the bumper is also retained by the clips. This construction is shown in Fig. 15, while Fig. 16 illustrates the spring shackles and the method of connecting these to the frame. This shackle is suspended on a very large shaft extending the full width of the frame and supported by brackets riveted to the frame.

On the Seldon trucks this shaft is replaced by a steel tube which ties the brackets together but the shackle is mounted on a separate stud.

Rebound Clips

In most cases the vehicle springs are equipped with rebound clips, the purpose of these may be explained as follows: When the road wheel strikes an obstacle

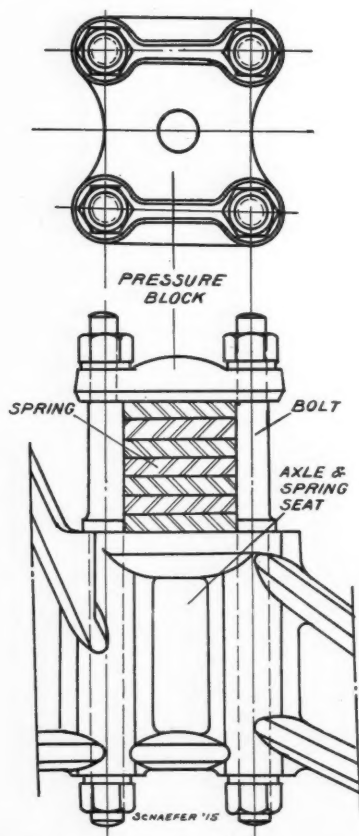


Fig. 11. Method of Mounting the Vulcan Five-Ton Springs

The seat is forged integral with the front axle and the springs are retained by long studs

in the road, the spring near it is compressed, whereby energy is stored up. Immediately after the compression has ceased the spring distends again, and if the blow was a heavy one the rebound will carry the body far beyond its original position. This rebound has a tendency to curve the main leaf of the spring in the reverse direction, and in order to prevent any serious diffi-

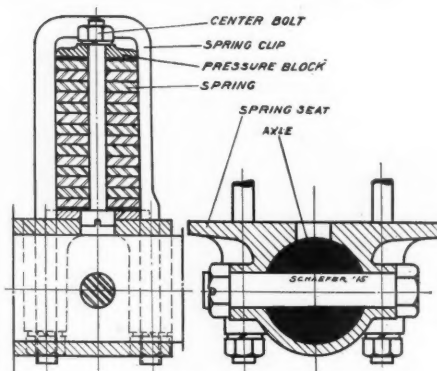


Fig. 12. Velie Three-Ton Rear Spring Mounting

Rear axle is of round section and cast spring seats are held in position by a heavy bolt passing through the axle.

culty it is necessary to transmit this shock to several of the leaves. This is accomplished by the rebound clips which are riveted to the shortest leaf which they surround and connected over the main leaf with a bolt.

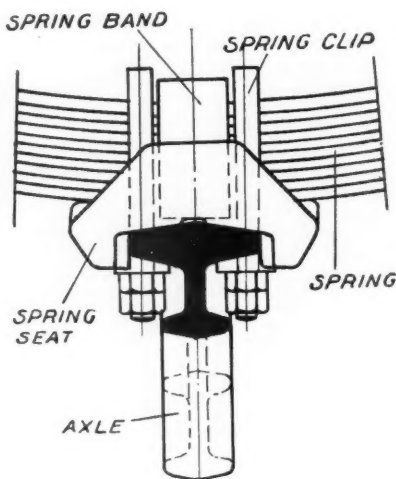


Fig. 13. Peerless Front Spring Bumper and Integral Spring Seat

It will be noted that the coil spring is attached to the pressure block, which acts as a bumper

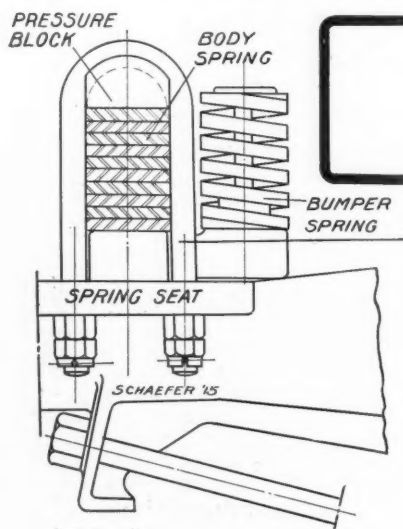


Fig. 15. Method of Mounting Spring on the Garford Trucks
Springs are mounted outside of the frame and bumper springs are of square section

Spring Alignment

Although the clips at the center of the spring tend to hold the leaves in alignment, they alone are not sufficient, and in order to prevent lateral motion of the leaves some other provision must be made. One of the most common methods is to

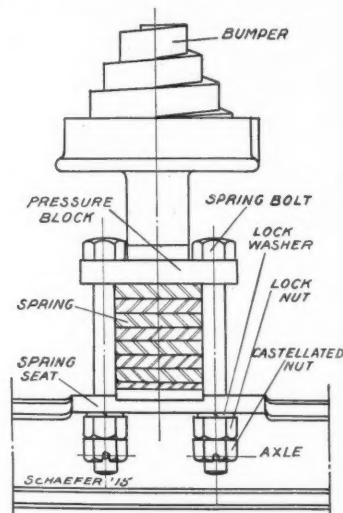


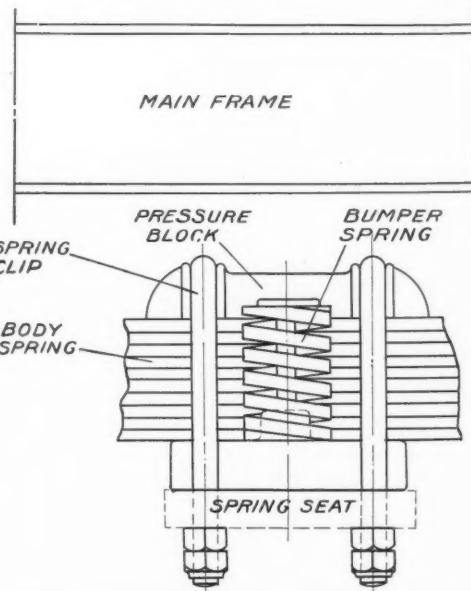
Fig. 14. Jeffery Quad Spring Mounting and Bumper

The bumper is made of flat metal and is a volute spring

raise a central longitudinal rib on the main leaves for a certain distance as shown in Fig. 2. The rib of one leaf enters the corresponding gutter on the next. Another plan is to provide the leaves with lips at right angles as shown in Fig. 5.

An objectional feature of the center bolt is that it materially weakens the spring and quite often spring breakage can be traced to the weakness through the center bolt hole. For this reason the center band, which is shrunk over the leaves is favored by a number of commercial car builders.

It is inadvisable to arrest abruptly the motion of a spring that is suddenly deflected, and for this reason bumpers or check springs, as they are sometimes termed, are used. Under excessive deflection these



bumpers strike the lower flange of the frame or brackets riveted to it for this purpose. The bumpers are so proportioned that they yield under the load, producing a cushion effect the same as rubber bumpers on pleasure vehicles.

Overload Springs

Overload springs may either be of the leaf or coil type, and so arranged as to act only when the load on the main springs reaches a certain amount. Below this load they do not contact with their seat or wear plate. The wear plate may be a separate platform, as illustrated in Fig. 8, or it may be formed integral with the pressure block. When coil springs are used, they are made of square section, attached, either to a frame cross-member or the axle. Two such springs are used, one on each side.

Spring Clips

The general desire to prevent breakage at the center is seen in the liberal proportion of the pressure blocks and spring clips. They represent the efforts of the various makers to provide a rigid connection between the spring and its seat. There is a growing tendency to employ the "U"-shaped spring clip which tends to exert an equal hold on each side of the spring, consequently the tension is equally distributed when the nuts are drawn up tight. They are made up of steel that will not easily become brittle under vibration.

Lubrication

In most cases the spring eyes are bushed with phosphor-bronze or steel and shackle bolts are hardened and ground. The object

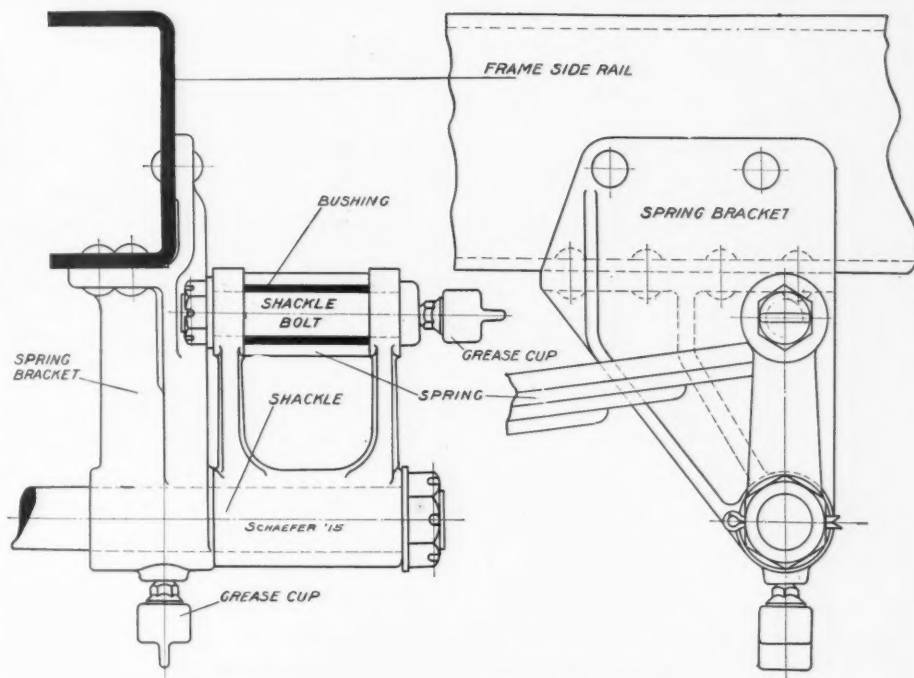


Fig. 16. Garford Rear Spring Shackle Construction
This illustration shows the method of connecting these to the frame

of the bushing, of course, is to provide some means to renew the wearing surface. The bolts are working continuously and will wear out quickly if they are allowed to remain dry. This lubrication is effected by grease cups which communicate with a hole in the bolt that permits the lubricant to reach the wearing surface.

Although friction between the spring leaves is desirable to an extent, yet it is necessary to keep the leaves lubricated when they bear against one another. This provision is usually made by the spring maker, and in most cases it is necessary to pry the leaves apart and introduce the lubricant with a knife.

"Heart and Soul in Selling Trucks"

How a California Dealer Established His Business

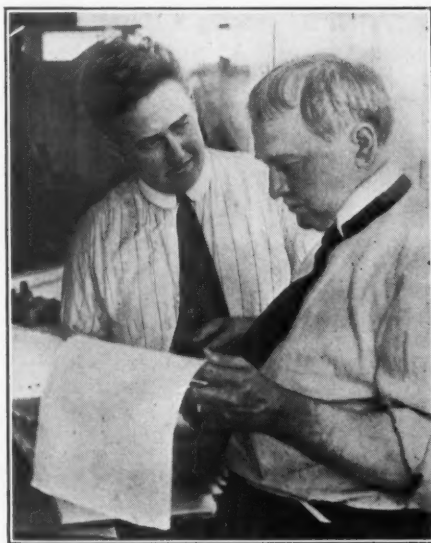
By C. L. EDHOLM



I TELL you a man must put his heart and soul into selling trucks, if he is going to make a success!" Emphasizing these words with a gesture of his clenched fist, like a man very much in earnest, Mr. M. S. Bulkley, who handles the Autocar in the far West, explained why he has been able to sell so many commercial cars in the six years he has been in the business in Los Angeles.

"I went into the business of selling trucks because of my confidence in Autocar construction, and because I was convinced that I could sell them. I knew about the car in the East and so when I came to Los Angeles, with only \$900 capital and an expensive family dependent upon my efforts, I picked that truck as the best business investment. It was hard sledding in the early days; for three months I tooted my horn and 'never sold a clam,' as the saying goes, but plugging is second nature with me. I did not allow myself to quit, and my first sale came almost without my direct effort. I had one car as a demonstrating machine, and I certainly kept it busy, but one day a concern that I had not given much attention called me up on the 'phone and announced that they

wanted it, and wanted it at once. I almost fainted as I hung up the receiver. That truck went to the purchaser the same day. It was bought by the Union Ice Co., the



M. S. Bulkley and His Manager, Mr. Hadley

Two hard-working individuals who believe that selling trucks is a business and not a game

manager of that company being familiar with the Autocar from eastern observation; and I may say that the old truck is still in business. After being used nearly six years, it was taken in trade for a new one, and I am utilizing it as a service car at present.

A Sale as a Result of Competitive Test

"That was the beginning of the sale of more than four hundred cars to 'satisfied owners.' The most difficult sale I undertook was a test in competition with eight makes of trucks conducted by the Los Angeles Water Department. The conditions of the thirty-seven mile run were decidedly strenuous. A route had been selected out of the city through the hills of Griffith Park, which at that time had no smooth roads. That was five years ago, and the grades have been lowered and the surface finished since, but at that time it was something of an endurance test to traverse the steep ways of that extensive park. From there on the route went out beyond Pasadena, and the City Representative, Mr. Brooks, went out of his way to find a course that included the worst possible road conditions. The tests were for such points as ability to negotiate steep grades, fords of sandy streams, short

The CCJ has most readers because it gives most information

turns, dust and dry sand, and brake operation on down grades. The last seventeen miles of the run was a speed contest. It was altogether something like the severe examinations given to trucks by military buyers for the nations at war. Each competing truck carried in addition to its capacity load an observer appointed by the Water Department, and no favoritism was shown. The results were satisfactory for me. I sold a car at once, and the city is now using twelve. The Water Department has nine of them which have extra seats for a repair crew, and carry pipe, tools, machinery and everything needed for general repairs. That was a difficult sale, because the conditions were hard to meet; but it was not a case of salesman's eloquence that won out, but simply ability to deliver the goods.

How Publicity for Purchaser Resulted in a Sale

"Another case in which selling ability, rather than just car merit alone, was involved is of some interest. That was a case where 'the other fellow' almost had the order. It was during one of the first automobile shows, and the prospect was a live business man ready for every point that would favor him. My agent rival had almost convinced him, or at least it seemed to be an even break, when I suggested one advantage quite outside the selling talk. I offered to exhibit the car sold to him in the Auto Show, with his firm name painted conspicuously upon the body, together with a big sign to the effect that this was the first machine sold during the exhibition. I also offered to use cuts of that car in our circulars, and the chance to get all that free publicity for his business turned the scale in my favor.

"Of course the ingenious selling method is not a main issue. Value is what counts in the long run. The purchaser must get the satisfied feeling that makes him a booster and brings him back with repeat orders. Sometimes it is necessary to analyze a man's business and determine whether this particular car is the one he wants. Sometimes an actual test is the proof that the analysis is correct. There was the case of the Los Angeles Transfer Co. which has now discarded horses in favor of nineteen Autocars. After studying the conditions of this concern, I decided that it needed our trucks and went to some expense to show them. Two Autocars, each with a capacity of a ton and a half were put into the service of the firm for a short period, and costs were carefully recorded and compared with costs of two two-horse teams and wagons for the same time. These trucks were used in the unfavorable close-in sections, for there was no question as to the value of the motor vehicle for long runs. However, as the transfer company operates extensively in the congested district, it had to be convinced that the truck would make good down town. The results were so favorable that the horse no longer figures in that company's business.

S-e-r-v-i-c-e Spells Success

"That is my slogan in the truck business and I impress it upon my entire force. Our guarantee is broad and we live up to the spirit of it in order to keep the friends we

have made. We have a large repair station, centrally located, and four service cars for the use of our customers. Any part requiring replacement within a year from sale, if the trouble is caused by defect, is replaced free and cheerfully. We have a maintenance contract, in which we offer to keep a car in excellent condition, house it, wash it and oil it daily for \$30 a month furnishing labor free for repairs and replacements unless caused by accident. For small owners this is profitable, and some of the big owners find it equally so.

"In fact I should say that the principles that make for success in this business are service; square dealing of the sort that makes your customer your friend; original advertising methods; a car that is built

visits all the prospects thus located and shows them the car; also he shows them the facsimile letters of four hundred owners, a 70-page booklet that endorses the truck over the signatures of men who have used it. The system is effective and thorough, and while it runs into money it gets results that justify the expense.

"Even in the rural sections, I find that our demonstrator does not have to talk 'motor vs. horse' any more. It is a case of our car against the other fellow's. There is only one place worth considering where the horse is holding his own: that is in a business involving short runs, with long delays in the congested district.

"My territory is in a very live section of the country, but in spite of their enterprise



Bulkley's First Sale

This Autocar was not only Bulkley's first sale, but the first Autocar sold on the Pacific Coast. It has now been in continuous service for six years.

right, and first, last and all the time hard plugging.

An Unusual Selling Campaign That Brings Results

"We keep up to the times in advertising methods, have a follow up system of letters to prospects and customers and at present are conducting a selling campaign of my own that is getting results. As you know, my territory includes all the far western states, the whole Pacific Coast, so a long distance campaign is required. Therefore, I have sent out two men and a truck to make the trip to San Francisco by the inland route and return by the coast; a two-month tour. The first man goes ahead by rail and goes through a town and its surrounding country with a fine tooth comb, you might say. It is his business to find people who are interested or may become so. They merely sign a card, stating that they would like to study our literature and see the truck demonstrated. These cards are sent to the demonstrator, who follows in the Autocar. He reaches town a day or two after the first man;

and broad-minded acceptance of new conditions, the western business men had to be convinced. In the old days they had to be convinced of the merits of the truck; now they have to be convinced of the merits of my truck.

"That leads me to an important element in the truck selling business: there should be a thorough understanding and co-operation between the factory and the agent. The dealer should be willing to sacrifice temporary profit, if necessary, for the good of the concern; and the factory should be prepared to make concessions if required. A feeling of partnership is essential: not, as is sometimes the case, a desire to make a dollar at the expense of the other member of the team. Contracts should be drawn up on such a basis between the dealer and the manufacturer.

Mr. Bulkley's views are worthy of consideration, as he is one of the most experienced dealers on the Pacific Coast. Besides the Autocar, he has recently taken over the Knox Tractor agency in Los Angeles and is also backing the Bulkley-Rider Tractor, a local product with a future.

The CCJ has most advertisers because it gives them biggest returns

Peculiar Motor Truck Situation in Denver

By CHARLES M. SMYTH

ONE of the most peculiar conditions now existing in this country relating to the introduction of commercial cars can be found in the well-known health resort, Denver, Colo. A high average of good weather and excellent condition of streets combine with other favorable conditions to bring truck operation to a minimum of expense. And yet here is where a peculiarity of the truck business exists. The proportion of auto trucks used in Denver, as compared with eastern cities of the same size or smaller, is far below the average. It seems impossible to wean many of the merchants here away from their bronco-drawn delivery.

The motor truck salesmen have tried to analyze the merchant from every point of the compass, but in many cases he has remained incomprehensible. Those who have been converted to the motor truck as a method of transporting their merchandise have in most instances been the merchants who find the lighter trucks of small capacity capable of filling their requirements. Here is what some of the successful agents have to say.

Takes on Trucks and Drops Pleasure Cars

In 1902 Charles Bilz started in the business of selling automobiles in Denver. He handled only pleasure cars. Mr. Bilz was early to comprehend the future of the motor truck, and in 1910 introduced them as a side line to the pleasure car business. He took the agency of the Chase truck with gratifying results, and it was not long before he found the profits from his sales of trucks to equal those from his sales of pleasure cars, though the magnitude of the latter was more than double that of the former. He finally dropped the pleasure car entirely from his business, and for three years just past has handled the Chase truck exclusively. Mr. Bilz claims about four times as many Chase trucks now in use in Denver as any other one make—excepting, perhaps, the light Ford chassis, which has kept an equal pace.

He does not try to fathom the reasons why Denver has been so backward in the use of motor trucks, other than the fact that it is not a manufacturing center. Says his business is now growing rapidly and his outlook is very bright for the future. His two new models of Chase trucks of 1500 and 2000-lb. capacity, with worm drive, are proving very popular, and the prospects are that they will take more rapidly in the future than the lighter model.

Mr. H. P. Sebolt, manager of the Denver Rapid Car Co. and sales agent for the G. M. C. gasoline truck, when asked concerning the apparent backward conditions in the truck business in Denver, replied:

"If it were not for my garage, which I run in connection with my sales department, I fear I might have found at times rather rough sledding by depending en-

tirely upon the sales of trucks. While I have sold a large number of trucks in the past seven years, I admit that I should have sold more when considering the size of our city and the volume of business done. Still, my success seems to compare favorably with that of others in the same line in Denver. I attribute it to the fact that I handle a reliable truck, and then



CHAS. BILZ

Gave up all pleasure car lines after his truck agency became established

see to it that my customer gets satisfactory service after he has made the purchase. Wherever I can I livery my customer's trucks, and at a satisfactory price. I am always careful to see that their cars are in good running condition each morning when they leave my garage. I never lead a prospective buyer to believe that he can get a 4-ton service out of a 1-ton truck, and consequently have few come-back complaints."



H. P. SEBOLT

He garages as many of his patrons' trucks as possible and sees that they get satisfactory service out of them.

Unusual Conditions Due to Health Resort

Mr. Sebolt thinks a peculiar condition exists in Denver that might be hard to duplicate in any other locality. The matter of installing a motor truck is usually figured upon an economical basis here, and seldom upon that of improvement of service. Figuring upon such a basis has brought out the remarkable fact that in some instances in Denver the motor truck is unable to compete with horse-drawn outfits under present conditions. Semi-invalided men, desiring open air and unskilled occupation, will work for a sum that will barely keep them alive. Tough and wiry bronchos are not high priced, and will live upon the poorest of nourishment. When a merchant is satisfied to allow his business to be represented by such despicable appearing delivery the motor truck salesman is left with little argument.

Norton's View of Denver Truck Prospects

Mr. S. E. Norton, salesman for the Buick truck in Denver, is most enthusiastic over the future of the truck business and speaks in no disparaging tone of his past business. He is at present behind in his deliveries and says: "Regarding truck sales in Denver in the past it seems that automobile salespeople have not given as much thought to selling trucks as they should. I presume it is because we could sell a pleasure car so much easier and have been satisfied with our profits from that source. But Denver seems so well supplied now with pleasure cars that new sales are becoming more difficult and we are naturally turning our attention to the truck. We are beginning to realize that the truck business has a splendid future and there should be a good many sales made in 2-ton trucks among our mills, warehouses, movers, etc.

"At this time we seem to have plenty of light delivery cars, and a good many are being sold each month in this class. There is still room for many more installations. Suburban towns are now taking advantage of the motor truck in a small degree, and have found them not only practical, but economical for getting their products into the city quickly, not having to depend upon the slow and various movements of the railroads.

"It behooves every manufacturer to assist his Denver sales agents to educate both large and small merchants to the use of motor trucks."

PROSPECTS FOR 1916 ARE BRIGHT

The Mitchell-White Co., representing the Sullivan line, stated that the present conditions are very good and that prospects for big business in 1916 are very bright. This concern had no previous experience in the commercial car line, being attracted by the possibilities afforded by the mechanical transport. The company was formerly engaged in the garage business.

HARRY W. HARRISON, WHO SHOWED LOS ANGELES ELECTRIC DELIVERY

By FRANK REED



PIONEERING electric delivery has given Harry W. Harrison two busy years in Los Angeles. In that time he has not only made a creditable number of sales of G. V. electrics, but has placed these sales where they are conspicuous examples among the leading firms in their respective lines of business, so they are important as a foundation for future development. And in addition he has built up a continuous income business in an electric garage for commercial cars exclusively that is the largest electric garage west of Chicago, housed in a new building which belongs to the business and is fitted with every convenience for electric garage and sales service. In his new garage he is giving service to forty-two trucks, of which he has sold twenty-nine himself, and has also sold ten to firms who garage them in their own quarters.

The new garage has 16,000 ft. of floor space on the ground floor, with 3000 ft. in a second floor at the front. There is garage space for seventy-two trucks. Harrison's Commercial Electric Garage is the only garage in the country to give the new G. V. electric battery service, which has hitherto been confined to electric central stations. The building is located in the most central position for convenient service to wholesale and retail merchants having delivery fleets, in the d. c. power distribution district, where risk of breakdown of electric service is at a minimum. The building equipment is as practical as it can be made. The garage gives complete service, if required. This consists of keeping trucks cleaned, oiled, greased and all repairs at a flat rate. The only additional charge upon the owners is for replacement of parts worn out or injured in accidents. Experience shows that there is very little variation in the service required by different cars of the same make, even under varying conditions of use, demonstrating that the flat rate plan is practical once the proper rate is determined. The service includes an inspection every night. The driver turning in the car is required to make a nightly report of its condition. Every week each car receives a thorough detailed special inspection. The night crew does all minor repairs and adjustments, oiling and greasing. The object is to keep the cars as nearly as possible in good as new serviceable condition every day. This shows where the garage links up to the proposition of selling electrics. Harrison is able to sell a man a car backed by a complete service of a responsible local concern as well as a responsible manufacturer. Of course, he maintains a service car.

The selling power of demonstration in the electric business, which has been one reason for Harrison's success, was shown when he sold the electric fleet to H. Jevne Co. in competition with every gasoline and electric car represented in the city. The Jevne Co. made a trial on a retail run, practically staging their own demonstra-

tion. They are up to the minute in their scientific knowledge of truck delivery, and bought the fleet on the showing in actual service for them.

Harrison's principles for running his business boil down to the main idea of knowing just what you can deliver, in terms of the buyer's needs, and then making the prospect know it, too. Be careful not to claim anything that is not possible, then let nothing shake you in your claim. Back it up to the limit by demonstration, letting the buyer handle the truck all he wishes. He will have to after he owns it, and he wants to know what he can do



HARRY W. HARRISON

Who sells electric trucks and stands for concentration and belief in what one is selling

with it. Having made a statement, live up to it, no matter if it causes a loss. Don't try to sell an electric where study of the prospect's business shows that he really needs a gasoline car. Harrison believes that misplacement of sizes, which causes loss of confidence, and is a bar to future sales, is more often the fault of agents or salesmen than of manufacturers. Once he displaced a 2-ton truck that a man had bought in an erroneous idea of his requirements with a 1-ton truck that ran 14,000 miles on a set of tires. He believes it is necessary to investigate conditions with the delivery man, as well as the boss, and in getting information from the deliveryman not let him make the mistake of boosting for a big truck just so he can get home twenty minutes earlier every night.

Harrison had a hard job to try to place in order of importance the five principles that help a dealer most. He thinks they may run something like this:

1. The truck.
2. Service for an electric, operating a garage and taking care of customers.
3. Securing intelligent and faithful service from drivers, which reduces maintenance cost and increases service.
4. Concentration, and belief in what one is selling. Put it where it finds conditions suitable for making biggest returns to the owner. If ever a truck gets misplaced, take it back.
5. Satisfied customers, who repeat and tell others. The main source of new prospects.

ABILITY OF MANUFACTURER AND SALES REPRESENTATION ARE IMPORTANT FACTORS

T. W. Garland, of the Garland Automobile Co., 1888 Broadway, New York City, agent for the Velie line of pleasure and commercial cars, stated that the future of the commercial car, in his opinion, assured. He took on the Velie line of trucks because of the demand, and believes that the ability of the manufacturer and the kind of sales representation rendered by the distributor are the most important factors in a contract. Difficult sales are best made, he stated, by convincing the prospect of the merits of the truck and by actual demonstration. Where competition has been unusually keen and a sale was captured it has been effected by showing the actual merits of the truck recommended.

Mr. Garland does not believe that sales can be accomplished by analyzing the prospect's business or suggesting changes; that is, as a rule. As to service, he believes that dealing honestly and fairly by a customer is the best service, as in any business. His success is attributed to prompt service, fair dealing, courtesy, a good truck and time sales. The price of a truck is a negligible factor, according to Mr. Garland, who stated that a good truck selling at a legitimate price is best. He admitted that competition was very keen in his territory, which includes New Jersey, and stated that it was not necessary to talk against horse transportation. The Garland Automobile Co. maintains a show room, a corps of trained truck salesmen, who employ a follow-up system, including follow-up literature.

ELECTRIC DEALER SAYS SURFACE HAS ONLY BEEN SCRATCHED

Mr. E. N. Wright, New York district manager of the Commercial Truck Co. of America, says: "I am glad to be able to say that prospects seem good for a big season in 1916. Improved business conditions so evident during the past month or two have evidently begun to affect the domestic truck industry.

"The electric truck is fast opening up for itself new lines—most recently in fire apparatus equipment. The recent order placed with the Commercial Truck Co. for twelve pieces by the city of Camden, N. J., was a result of the quite remarkable results obtained from the city of Philadelphia using a number of similar pieces during the past three years.

"Replacing of the chain-driven by the new types of enclosed gearing marks an epoch in the truck industry, as it did eight years ago in the pleasure car field. The construction, manufacture and possibilities of the present motor truck, however, have got away ahead of the ability of the manufacturer to dispose of them. Considering what the motor truck field should be, the surface has been barely scratched, the work so far having been, quite naturally, along the lines of least resistance. The enormous field still occupied by horses is waiting only for the right motor vehicle to be properly presented."



Firestone

Pressed On Tires

Unmatched Service!

Resiliency and Toughness, combined as only Firestone methods can combine them.

Firestone Construction, making an absolute unit of saw-tooth channel steel base, hard rubber sub-base and extra thick tread rubber.

The Results in Service have proven the superiority of these Firestone features.

A special Firestone compound is made for electric trucks.

There is a Firestone tire for every road, load and condition of service.

Call the Firestone Station nearest you for help in solving your service problems.

Firestone Tire & Rubber Co.

"America's Largest Exclusive Tire and Rim Makers"

Akron, Ohio—Branches and Dealers Everywhere

APPROVES OF LARGE SALES AND SMALL PROFITS

By C. P. SHATTUCK

THE views of Eugene P. Herrman, president of the Republic Motor Sales Co., 306-308 West Sixty-fourth street, on the general conditions and future of the truck industry in New York City, are of value, as he has been identified with commercial cars for some years past and was vice-president of the Sternberg Motor Truck Co. The wonderful opportunities afforded by the commercial car as a commercial proposition early attracted Mr. Herrman, and he is a live wire in every sense of the word. He firmly believes that there is a wonderful future for the commercial car, and that the agent representing a good truck selling at a reasonable price, and employing business methods, is bound to achieve success. "Dealers' opportunities have been largely increased," said Mr. Herrman, "by the manufacturer turning out a truck to sell to-day for \$1500 that formerly represented a cost of \$3000 to the purchaser." Mr. Herrman evidently believes in the Ford policy, as he quoted the axiom of large sales and small profits.

In discussing the agent's contract with the manufacturer, Mr. Herrman said that in his opinion the manufacturer should give reputable agents an opportunity to turn their money over by a five or a ten days' sight draft. The majority of the contracts made are, stated Mr. Herrman, all in favor of the manufacturers.

Mr. Herrman's method in closing a difficult sale is to enact the role of a good listener and allow the prospect to do the talking. "I firmly believe in what you might term the buyers' right, and also believe that no salesman can succeed in sell-



EUGENE P. HERRMAN

President of the Republic Motor Sales Company, of New York City

ing trucks unless he believes in what he tells the prospect and can make him believe in what you tell him. As to service, I am a believer in it, but I contend the customer should pay for service to which he is not entitled and that it should be very fully explained, that no false impressions be created by a salesman. If a dealer in commercial cars expects to be

successful, to build up a stable business, he must observe five rules. He must be honest with his prospect and customer, keep hustling, never dodge a customer, live up to every word of the contract with the customer and instill these rules in the minds of his salesmen."

The price of a line plays a considerable part in the consideration of a line by Mr. Herrman, who believes in a large production of a high-grade truck selling at a low price, and that such a line appeals to him through observation of general selling conditions. Like many of the dealers interviewed by the representative of the *Commercial Car Journal*, Mr. Herrman believes that it is the exception rather than the rule when it is necessary to talk the cost of horse delivery to a prospect. "As to the future of the motor truck industry, as indicated by my territory, you can say that it is wonderful," said Mr. Herrman.

The Republic Motor Sales Co. maintains a service station, but will shortly move into new quarters, which will be equipped to meet every demand that may be made upon it by the users of Republic trucks.

BALTIMORE BRANCH MANAGER'S STATEMENT OF CONDITIONS

By LOUIS D. KRAKOW

FRANK C. Rulon, Baltimore branch manager for the State of Maryland and Washington, D. C., for Mack and Saurer trucks of the International Motor Co. of New York City, says: "I was attracted to the motor truck industry because I was prompted by a conviction that horses would eventually be replaced for hauling and teaming purposes. This is a natural evolution brought about by the modern business men's tendency to apply thought to his business. Horses were used simply because something better was not known, and precedent was being followed without thought. I had no early financial difficulties to overcome, as my initial position was as a salesman with a fixed stipend per month. I have been connected with the International Motor Co. for five years and have handled Mack and Saurer trucks exclusively. Baltimore is the largest business center of this territory, and motor trucks did not find a proportional market here, compared to other cities of similar positions, owing to poor street conditions (until recently), and it being a cheap market which attracted the cheaper make of trucks, the operation of which did much to retard the progress of the business by creating an adverse impression through their expense of upkeep and unreliable service. I have never had a dealer's experience.

"Service is absolutely essential to successful truck dealing and I always aim to perfect this feature. Our salesmen are instructed to talk service intelligently and our Service Department is instructed to make good in a detailed way on all features of this branch.

"I attribute my success as a commercial car dealer to the following five reasons: Connected with a concern whose aim is to build the best and sell it upon liberal terms; truthful statements; pleasant recep-

tion to the customer and a disposition to be faithful to the customer, covering the slightest detail; ability to create and maintain an efficient organization; and, a liberal and fair method of making adjustments upon claims made by customers.

"The line that appeals to me best is that line that offers the best quality and usually demands the highest price. The necessity for referring to the horse cost of delivery is rapidly diminishing, as most horse owners admit the superiority of motor trucks in most lines of business;



FRANK C. RULON

Baltimore branch manager for International Motors Company, distributing Mack and Saurer trucks

it simply being a question, if it is within the scope of their pocketbooks, to make installation of same. The part that price plays in the consideration of a line of trucks, in my estimation, is first to obtain the best truck and then assure one's self the price is not excessive for the article.

"Indications in my territory practically assure a tremendous success for the industry, as sales are constantly increasing and trucks are being applied to new lines constantly. I feel confident, that with a maintenance of our present selling plan and business system we are bound to very materially increase the business."

PREDICTS ELIMINATION OF HORSE-DRAWN EQUIPMENT IN TWO YEARS

Harry W. Gaston, sales manager of the truck department of the Reo Motor Car Co. of New York City, Inc., says that the sales in his territory, which includes New Jersey and part of Connecticut, have shown an increase of 10 per cent. for each month during the past 18 months. He predicts that the horse-drawn equipment will be eliminated in 2 years.

CUSTOMER CONSIDERS QUALITY AHEAD OF PRICE

W. Walter, head of the Walter Motor Truck Co., reports an increasing demand for commercial cars, particularly trucks of large capacity, and that the average purchaser considers quality irrespective of price.

(Dealers' Articles continued on page 44)

The CCJ has most advertisers because it gives them biggest returns

WHITE TRUCKS

Awarded the **GRAND PRIZE**
BY THE PANAMA-PACIFIC INTERNATIONAL
EXPOSITION AT SAN FRANCISCO



THE ONLY GRAND PRIZE—THE HIGHEST AWARD FOR MOTOR TRUCKS

Was conferred upon White Trucks by the Superior Jury of Award, as officially announced by the Secretary of the Jury under date of August Second.

This is the **ONLY GRAND PRIZE** received by any motor truck at the Panama-Pacific International Exposition.

This decision of the Superior Jury of Award reflects the opinion of the largest users of motor trucks throughout the world—and is in accordance with the actual service results of motor truck

experience. The points of merit upon which the Grand Prize is awarded are identical with those that have determined the selection of White Trucks by America's foremost firms in every line of business.

White supremacy in the motor truck industry is thus recognized by the highest award that can be bestowed by the greatest exposition the world has ever known—just as this supremacy has been recognized by motor truck users for many years.

REGARDING OTHER CLAIMS

The decision of the Superior Jury is final in the matter of Exposition awards. Hence any announcements of other motor truck manufacturers, claiming to have received the Grand Prize and Highest Award for motor trucks at the Panama-Pacific International Exposition, are automatically denied by this decision of the Superior Jury of Award.

THE WHITE COMPANY
CLEVELAND

Largest Manufacturers of Commercial Motor Vehicles in America

THINKS SERVICE A VERY STRONG POINT

By C. P. SHATTUCK

REPRESENTING lines of commercial cars, including a size for every need, from 1000 lbs. to 5 tons capacity. Howard W. Walton, sales manager of the Lippard-Stewart Motor Sales Co., of 136 West 52d street, New York City, is entirely familiar with the problem confronting the dealer in Greater New York, Long Island, Staten Island and New Jersey. Mr. Walton has handled commercial cars for over four years and has made a careful study of conditions. He considers the commercial car the biggest and best proposition ever offered the business man, and is enthusiastic over the possibilities of the future.

Mr. Walton in discussing the contract with the manufacturer, suggests that the factory ship to the agent and not against a sight draft bill of lading. In explanation he quoted the Vim delivery car which he represents. "These cars come in lots of five and six and as we have to have special body work, painting and lettering before we deliver them, you can readily see that it ties up considerable money. On big cars, such as a 3- and 5-ton truck I would suggest that the factory ship on a thirty-day note, particularly if the agent be well known to the factory and has handled their lines for some time."

Mr. Walton is a great believer in service and stated that his most difficult sales, especially where competition was very close, were closed because of the service given his customers. In explanation he said that in several cases where the prospect was undecided, that the sale was captured from the competitor because of the service. "You see," said Mr. Walton, "we placed our prospect in touch with our customers on the 'phone. I consider service a very strong point; in fact, service is 75 per cent. and the car 25. Service means service twenty-four hours every day. It is a very strong point. I recall another instance of where our service closed a sale for several of our delivery cars. The concern is one of the largest dealers in leather novelties, in the city, and the company decided to replace its horse-drawn equipment with motor vehicles. There was strong competition among the dealers for this contract. The cost of maintenance, etc., were factors, but we closed by submitting a list of users of our car and asking the buyer to call up every house."

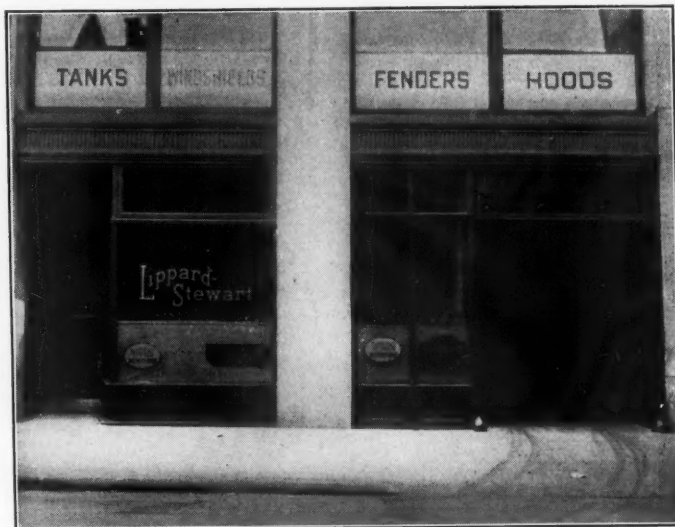
The sales price of a car is a point to be considered, according to Mr. Walton, especially if the machine be a light vehicle, such as a delivery type, as one is obliged to compete against the Ford. With large trucks the prices are more uniform and purchasers are better informed as to the cost of operation, maintenance, etc. Mr. Walton firmly believes that the discount or commission allowed dealers in New York City is too small when it is considered that the agent is under enormous expense.

"The cost of rental for office and a service station, advertising, lighting, heating, office force, salesmen, demonstrations, etc.," said he, "is considerably greater than in

smaller cities, and for this reason I believe that the manufacturer should allow the New York dealer a larger discount. Some method could be adopted whereby the discounts could be equalized, and it should not be a difficult matter for the factory to obtain figures on costs and arrange a sliding scale. For example: The cost of maintaining a service station and office in Newark is not as expensive as in New York, and the agent in that city is bound to obtain a greater return on his invested money than in this city. And it does not require as great a capital."

Mr. Walton says that it is rare that he has to talk costs on horse delivery, because the business man realizes the advantages of the motor vehicle and that it is a necessity in these days of competition. Leads for the sales force are obtained mostly through satisfied customers and the newspapers. The Lippard-Stewart Motors Sales Co. employs a follow-up system and utilizes a card system whereby every salesman makes a daily report. These are so arranged that the sales manager can keep in close touch with the progress of his staff and is able to make suggestions when a salesman is having difficulty in closing a sale. Posted in the office of the sales manager is a bulletin board teeming with pertinent suggestions, and the reports keep the salesmen fully posted on all details, an arrangement economizing the time of the sales manager.

The service station is on the ground floor, is about 100 by 125 ft., and accommodates about forty cars. In addition to the Lippard-Stewart trucks and Vim cars, the company is agent for the United, and any of these models can be obtained by a customer on a service rental basis. The cost of rental is the lowest that each type of machine can be operated efficiently. These figures are accurate, were computed carefully and checked. A customer can obtain a car in the event of accident, etc., night or day. It is this service, coupled with a study of transportation problems, that have been largely responsible for success achieved by the company.



Entrance to Service Station
With offices of Lippard-Stewart, United and Vim trucks

THINKS DEALERS' DISCOUNT SHOULD BE LARGE IN BIG CITIES

By C. P. SHATTUCK

EMERSON BROOKS, 250 West Fifty-fourth street, sales representative of the Metropolitan district for the Croce Automobile Co., Asbury Park, N. J., advocates an increase in the agent's discount, stating that it should be at least five per cent. more in large cities like New York City on account of the increase in overhead expense which is entailed by being located in the automobile districts. He recommends a practice of giving the purchaser of a truck a card entitling him to a specified number of one-half hour free service. "Give the customer all the free service he is entitled to," explained Mr. Brooks, "but this does not apply to the replacement of defective parts. The average service required from the dealer by truck owners could be entirely obviated if competent drivers were employed." Mr. Brooks cited a case where a commercial car had been in continual service for four years, and owing to the arrangement made with the driver by the owner, the machine had not been in a repair shop or service station during that period.

When the owner purchased the truck he made a contract with the driver, agreeing to pay good wages, but stipulated that the pay would cease the moment the car went to a repair shop. It is stated that the plan has been most satisfactory both to the owner and the driver. Mr. Brooks said that the driver was of the average capability, but he used his car intelligently and gave it the best care possible. The result has been that the machine has not been laid up a day except for the annual overhaul, which was performed by the driver.

Hurlburt Motor Truck Co., of 42nd St., New York City, has leased old plant of the Mott Iron Works on the Harlem River and the Mott Haven Canal for the manufacture of motor trucks. Up to the present time, the company has been manufacturing its trucks in Chicago, Ill., and Sharon, Pa., and will continue the plants there.